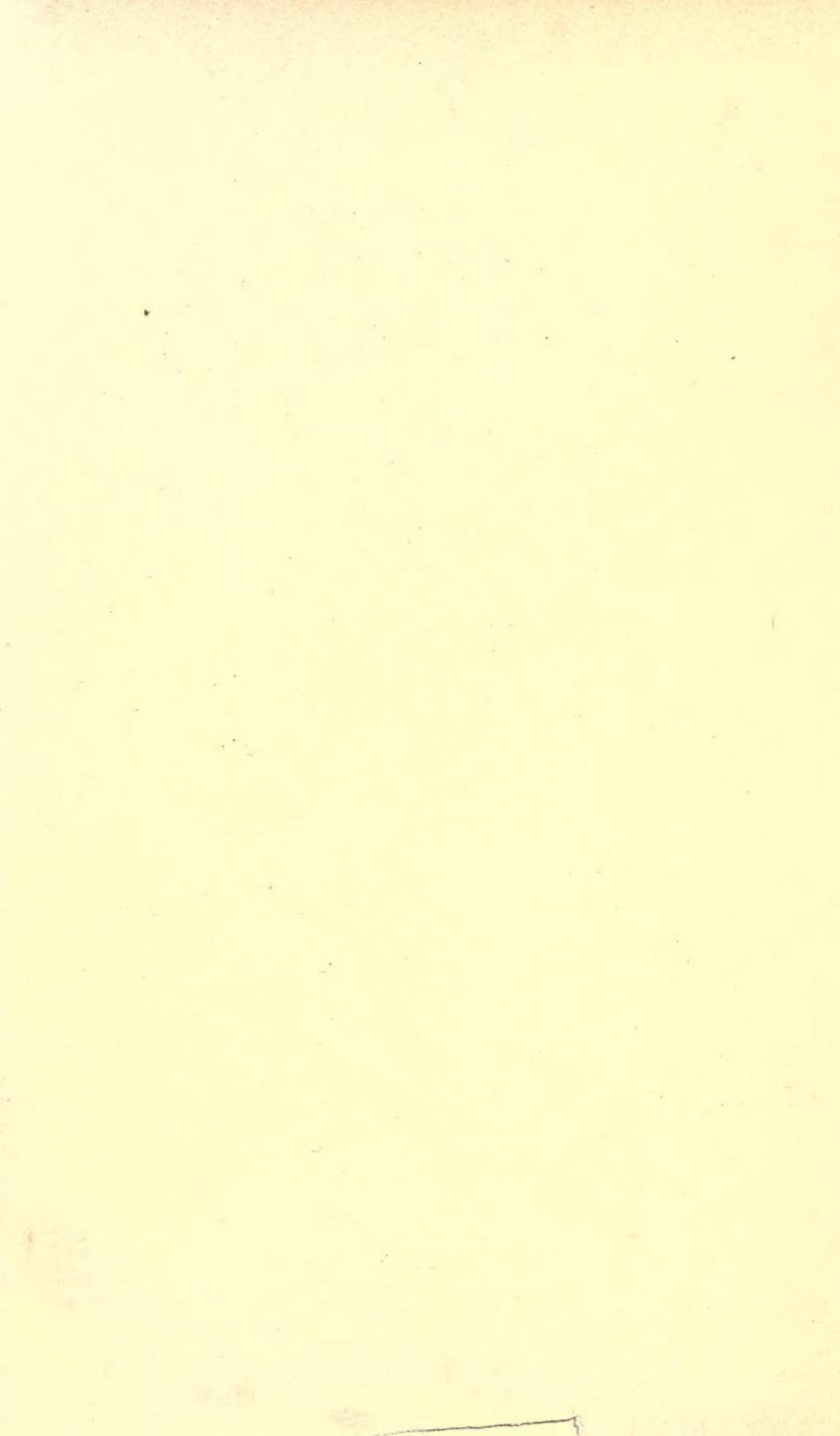


36.





CANARIES

1. Lizard. 2. Spangled Back. 3. Jonquil. 4. Mealy Bird.

CAGE AND CHAMBER-BIRDS

THEIR NATURAL HISTORY, HABITS,
FOOD, DISEASES, MANAGEMENT, AND MODES OF CAPTURE.

TRANSLATED FROM THE GERMAN OF

J. M. BECHSTEIN, M.D.

WITH CONSIDERABLE ADDITIONS ON
STRUCTURE, MIGRATION, AND ECONOMY.
COMPILED FROM VARIOUS SOURCES BY H. G. ADAMS.

INCORPORATING THE WHOLE OF
SWEET'S BRITISH WARBLERS.

WITH NUMEROUS ILLUSTRATIONS.

LONDON: GEORGE BELL AND SONS, YORK STREET,
COVENT GARDEN.

1885.

c Bath

LONDON :

PRINTED BY WILLIAM CLOWES AND SONS, LIMITED,
STAMFORD STREET AND CHARING CROSS.

SF461
B4
1885

LIST OF ILLUSTRATIONS.

THOSE PRINTED IN CAPITALS ARE ON STEEL, THE REMAINDER ON WOOD.

No.		described	Page
1.	CANARIES, <i>Frontispiece.</i>		277
2.	SPRINGES (<i>for Bird Catching</i>)		25
3.	Parts of Wing		32
4.	Clutching Feet		32
5.	Walking and Running Feet		33
6.	Garrulous Roller		36
7.	Birds of Prey—Heads		52
8.	KESTRIL, <i>Male and Female</i>		54
9.	WHITE OWL		57
10.	RAVEN		74
11.	JAY		95
12.	GOLDEN ORIOLE		107
13.	CUCKOO		113
14.	GREAT GREEN MACAW		125
15.	LESSER SULPHUR-CRESTED COCKATOO		138
16.	PURPLE-CAPPED LORY		143
17.	GREEN WOODPECKER		153
18.	KINGFISHER		164
19.	Foot of Woodpecker and Nuthatch		171
20.	CROSSBILL		172
21.	BULLFINCH		181
22.	SNOW BUNTING		209
23.	Nest of Chaffinch		235
24.	MOUNTAIN FINCH		245
25.	LINNET		252

No.		Page
26.	GOLDFINCH	262
27.	STARLING.	327
28.	WATER OUZEL	331
29.	BLACKBIRD AND THRUSH	346
30.	NIGHTINGALE.	355
31.	WREN	419
32.	WHEATEAR	426
33.	GREY WAGTAIL	439
34.	BLUE TITMOUSE	450
35.	RING-DOVE; OR, WOOD PIGEON	463
36.	COLLARED TURTLE	468
37.	PARTRIDGE	473
38.	SWANS	487
39.	Nest of the Bullfinch	490
40.	——— Woodpigeon	491
41.	——— Goldfinch	491
42.	——— Thrush	491
42.	——— Bottle-Tit	491



NEST OF THE MAGPIE.

EDITOR'S PREFACE.

PERHAPS no work ever did more to encourage the growth of that taste for Ornithology, which has of late become so widely diffused among all classes of society, than DR. BECHSTEIN's admirable History of Cage, or Chamber-birds (*Stubenvögel*). In Germany, where it first appeared, and in various other parts of the continent, as well as in England and America, it has gone through several editions, and become a standard work of reference, not only to the mere Bird-fancier, but also to the scientific Ornithologist. Since the death of the Author, a new edition, comprising the results of his latest experience, has appeared, under the superintendence of DR. LEHMANN, a friend, whose kindred tastes and pursuits admirably fitted him for the task.

In the present Translation, which is from this improved edition, the Author's plan of arrangement has been strictly followed; and a large amount of additional matter introduced, from the most authentic sources; including the whole of SWEET'S BRITISH WARBLERS, a work of great reputation, now extremely scarce. Several species not mentioned by BECHSTEIN are described, for the first time, in this edition; indeed, no pains have been spared to render it as perfect as possible.

H. G. A.

PREFACE TO THE FIRST EDITION.

THE work which I now offer to the public, *The Natural History of Cage-Birds*, is one which I have long been solicited to write by many of my friends.

Many persons who would find pleasure in keeping birds, are both unable to procure them, and ignorant of the proper method of treatment. Others, while possessing a certain degree of knowledge on these points, are unacquainted with the best and easiest methods. It is for such persons, and not for students of natural history, who are able to refer to more scientific works for the requisite information, that the present volume is designed.

The statements contained in the following pages claim credit and authority, on the ground that they are the result of personal observation and experience. From childhood, I have always been passionately fond of birds; and even now I cannot pursue my literary labours with pleasure and success, unless my room be enlivened with the song of some forty or fifty, which flutter about me at their pleasure. The reader therefore may, naturally, suppose that I have bestowed considerable attention on the subject, and endeavoured to ascertain not only the easiest, but the cheapest and best methods of preserving my feathered favourites in health. I have only to hope that the success of my attempt to impart information to my readers, may be commensurate with the opportunities which I have enjoyed of collecting it.

It is possible that different opinions may have been formed as to the proper scope and interest of a work like the present. The following remarks will explain the mode in which I have divided the subject.

I have described all the indigenous birds which may be successfully kept in the aviary; and, with regard to foreign birds, have confined my attention to such as are most usually imported into Germany, and may be procured with little difficulty.

For convenience of reference, I have in this, as in my other

works on birds, arranged the matter under the following heads:—

Description.—An accurate description of each species is necessary to guard the amateur against the tricks of the bird-sellers, who often do not hesitate to sell a female as a male, or substitute one species for another. It may also tend to foster a taste for natural history in the lover of Cage-birds, and direct his attention to such observations and researches as may tend to the advancement of science.

Habitat.—Among the first questions prompted by the desire to possess a bird of any particular species, are, when and where is it to be procured? and when procured, in what manner can its mode of life in confinement be best adapted to its natural habits? My remarks under the above-mentioned head are designed to answer these questions.

Food.—Their food, which should resemble as closely as possible their natural nourishment, is one of the particulars most carefully to be attended to in the management of Cage-birds. I have therefore divided this section into two parts, which treat respectively of the food of Cage-birds, first in a wild state, and secondly in confinement.

Breeding.—A knowledge of the method by which Cage-birds may be induced to propagate their species, is rendered necessary by the fact, that many birds cannot be kept with advantage except reared from the nest, or when removed from the parent birds at a very early period.

Diseases.—The numerous diseases incident to Cage-birds may be accounted for by the want of exercise and natural nutriment experienced in the confinement of the aviary. I have not thought it necessary to be very explicit on this subject; as it is one which yet requires further elucidation on the part of anatomical and medical science.

Mode of Taking.—Under this head the reader will find directions which will enable him, with a little trouble, to procure for himself most of our indigenous birds.

Attractive Qualities.—To the end of my account of each species, I have appended a short statement of the qualities which render it a desirable acquisition to the aviary.

WALTERSHAUSEN, Oct. 20, 1794.

PREFACE TO THE SECOND EDITION.

THE fact that within five years I have been called on to issue a second edition of this work, is the surest proof of my success in the attempt to supply a general want. I must confess, that none of my works has met with such a favourable reception as this, for which I have received the oral and written thanks of readers of all classes; and particularly of many ladies of wealth and distinction, some of whom also I have had the pleasure of assisting by my advice. It gratifies me to be able to announce, that I have introduced into this edition improvements, which will be found both numerous and important. I have not only interpolated the results of fresh observations in my account of particular species, but changed, and I hope amended, the general arrangement of the work, and added descriptions of many foreign and indigenous birds, which were omitted in the previous edition.

I cannot refrain from expressing the pleasure afforded me by the conviction that this work has not only increased, by the information which it contains, the interest already taken by some of my readers in the feathered creation, but has also been the means of directing the attention of many others to the observation and love of natural objects. It is my earnest wish, that in its new form, this book may again be the means of increasing the number of those who study and admire the wonderful works of God, and thus of fulfilling one of the chief purposes for which we have been surrounded with the countless host of living creatures.

WALTERSHAUSEN, Nov. 1, 1799.

PREFACE TO THE THIRD EDITION.

I HAVE but few prefatory observations to make to this new edition of my *History of Cage-Birds*. A comparison with the preceding, will shew that it has been considerably enlarged and improved. It has, indeed, been objected by some, that I have already stretched the limits of my work too far, by admitting into it descriptions of birds, which can only be tamed with considerable difficulty; *e. g.* the Common and Gold-crested Wren. To this I reply, that in my own opi-

nion, and that of many others, I should have been guilty of serious omission, had I included only the species which demand little care and patience on the part of the amateur; and with respect to the particular birds cited, I know several persons who take great pleasure in allowing one or more Wrens the free range of their rooms. I must, also, be allowed to express my conviction, that in a work like this, it is hardly possible to err on the side of superfluity. In the present edition, also, the reader will find accounts of various foreign species, which may be procured from the bird-dealers.

PREFACE TO THE FOURTH EDITION.

By the German Editor, DR. LEHMANN.

THE Publishers of this new edition of BECHSTEIN ON CAGE-BIRDS, believe that an apology for reproducing a work so indispensable to the amateur, and so valuable to the scientific naturalist, is hardly necessary. The constant inquiries for it, during the lengthened interval in which it has been out of print, are the surest proof that it has not been superseded by any of the more recent works which have been produced upon the same subject.

The changes in the present edition are confined to a few emendations; the omission of much which time and experience had demonstrated to be superfluous; and a considerable addition to the section upon Bird-catching. It was my own opinion, as well as that of several competent judges whose advice has been asked, that the form of the work did not require to be re-cast, and that it was due to the memory of an author, so much respected, both as a naturalist and in private life, to give his favourite work to the public as nearly as possible as he left it. In no other way could be assured to the work the advantages derived from the Author's engaging style, which has already so materially contributed to the acceptance it has found with the public.

HAMBURG, *April*, 1840.

CONTENTS.

INTRODUCTION.

PAGE

SECTION 1. OF CAGE-BIRDS IN GENERAL. What the Author understands the term "Stubenvögel," to mean.—Importance of being able to distinguish between male and female, varieties of colour, &c.—Number of species comparatively small.	1
SECTION 2. VOICE AND SONG OF BIRDS. Peculiarity and variety of vocalendowments.—Power of expressing passions and emotions, exciting attention, &c.—Cries imitated by fowlers.—Wild Birds and tame, different means of exciting them to sing.—Each species a distinct language.—What is a <i>song</i> , and what a <i>call</i> : instances, Chaffinch and Raven.—Song generally a prerogative of the males.—Natural and artificial songs.—How the latter are acquired.—Classification of songs.—Periods of song.— <i>Recording</i> but an exercise of the organs.—Why one Bird sings better than another.—Remark of BARRINGTON'S.—How to improve the song of Wild Birds.—BRODERIP on the Melody of Birds.—COLONEL MONTAGUE, RENNIE, SYME: BARRINGTON'S Table on comparative merits of British Song Birds.—MACGILLIVRAY's description of structure of vocal organs.—Superiority ascribed by some authors to greater degree of nervous energy.—Song of the Nightingale written.—Melody of Birds not to be described, &c.	1
SECTION 3. HABITATION AND GENERAL TREATMENT. Space required by different species.—Modified amount of liberty.—Cleanliness essential.—When and how to clean cages, feet, &c.—Method of taming Birds.—How to make them sing . . .	12

SECTION 4. FOOD. Chief resemblance to natural diet. —DR. MEYER's method of inducing fresh-caught birds to eat. —Classification of feeders.—Preservation and preparation of Food. —Occasional variety.—Recipes for Universal Pastes.—Fresh supply of Water.—When to feed, and quantity..	15
SECTION 5. BREEDING. Chief requisite.—Kinds of Habitations. —Materials for building.—Food at this period.—Removal of the young Birds, &c. &c.	18
SECTION 6. DISEASES. Exciting causes of Disease.—General rules for treatment, and description of maladies	19
SECTION 7. AGE. Longevity of Cage-Birds, on what it depends.—Satisfactory data.—Why Birds live longer than the Mammalia.. .	23
SECTION 8. BIRD-CATCHING. The Fowler's essentials of success. —Methods and calls.—General directions.—Periods of least difficulty.—Thuringian bird trap.—Best Birds for decoys.—Water trap.—Nooses and Springes.—Folding cages.	23
SECTION 9. SWEET'S ACCOUNT OF THE GENUS SYLVIA. Finest Songsters.—Degrees of warmth required by different species.—Food in confinement, how prepared and how given.—Supply of Insects for the winter, where found, and how kept.—Gravel and water.—Restlessness at periods of Migration.—Best modes of capture.—Treatment during Moulting.—Care of bad feet.—General food, how to make and keep it.—Thrive and sing better in an open, than a covered cage.—Not to be allowed to wash too often.—HON. and REV. W. HERBERT, and PROFESSOR RENNIE, on food, &c.	26
SECTION 10. STRUCTURE OF BIRDS. Described by CUVIER.—Anatomical Structure.—Cut of Wing.—Clutching, Walking, and Running Feet.—Feathers, Eyes, Ears, Organs of Smell, Tongue, Brain, Vocal Organs, Internal Parts, &c.	31
SECTION 11. PLUMAGE OF BIRDS. MUDIE'S description.—Cut of Roller.—Parts of Plumage.—Chemical nature of Feathers.—	

Their sensibility to atmospheric influences.—Periods and causes of Moulting, &c.	36
SECTION 12. HABITAT AND MIGRATION. CUVIER'S account.—	
Habitat not circumscribed.—Regularity and method of migration.—Periods of arrival and departure.—Each species, its distinct habitat.—THOMPSON's account.—Remarks by KNAPP, &c.	42
SECTION 13. CLASSIFICATION. WILLOUGHBY and RAY'S System.	
The LINNÆAN, CUVIER'S, BRISSON'S, TEMMINCK'S.—The Quinary, its beauty and convenience ; will it stand ?—MACGILLIVRAY and BUFFON on systematic arrangement.—Works to be referred to by the student.—British Birds, number of species.—BECHSTEIN's classification.	48

DIVISIONS OF BIRDS.

SECTION 1. BIRDS OF PREY. <i>Accipitres</i>.—Cut of Rapacious Beaks.	
—Species : 1, Kestrel.—2, White, or Barn Owl.—3, Little Owl.	53
SECTION 2. CROW TRIBE. <i>Coraces</i>. Species : 4, Great Ash-coloured Shrike.—5, Lesser Grey Shrike.—6, Woodchat Shrike.—7, Red-backed Shrike.—8, Raven.—9, Carrion Crow : Lines by AINSWORTH.—10, Hooded Crow.—11, Rook.—12, Jackdaw.—13, Jay.—14, Nutcracker.—15, Magpie.—16, Roller.—17, Golden Oriole.—18, Hoopoe.—19, Cuckoo.—20, Minor Grackle.	61
SECTION 3. LARGE-BEAKED BIRDS. <i>Leviostres</i>. Classification of Parrots, their geographical distribution, &c.—Species : 21, Red and Blue Macaw.—22, Blue and Yellow Macaw.—23, Great Green Macaw.—24, Illinois Parrot.—25, Blue-headed Parrot.—26, Yellow Parrot. — 27, Long-tailed Parrakeet. — 28, Pavouan Parrot.—29, Red and Blue-headed Parrakeet. — 30, Cardinal Parrot, its varieties.—31, Purple Parrot.—32, Whiskered Parrot.—33, Rose-ringed Parrakeet.—34, Red-crescented Parrakeet.—35, Grey-breasted Parrot.—36, Carolina Parrot.—37, Amboina Parrot.—38, Great White Cockatoo.—39, Lesser do.—40, Red-crested Cockatoo.—41, Red-vented Cockatoo.—42, Banksian	

Cockatoo, its varieties.—43, Ash-coloured Parrot.—44, Ceram Lory.—45, Purple-capped Lory.—46, Black-capped Lory.—47, White-fronted Parrot.—48, Amazon Parrot.—49, Yellow headed do. and varieties.—50, Blue-faced Parrot, and varieties. 51, Blue-necked Parrot.—52, Rose-ringed Parrakeet.—53, Little Blue and Green Parrakeet.—54, Yellow-breasted Toucan.—55, Brazilian Toucan.—56, Preacher Toucan.—Observations on Toucans by VIGORS, CUVIER, and D'AZARA.	118
--	-----

SECTION 4. WOODPECKERS. *Pici.* Cuvier on Woodpeckers.—

Species : 57, Green Woodpecker.—58, Greater Spotted Wood-pecker.—59, Middle do.—60, Lesser do.—61, Wryneck.—62, Tourako.—63, Kingfisher.—64, Nuthatch, cut of feet.	152
--	-----

SECTION 5. PASSERINE BIRDS. *Passeres*, not a good term of distinction.—Species :

65, Common Crossbill.—66, Fir Grosbeak.—67, Pine Grosbeak. — 68, Bullfinch. — 69, Greenfinch.—70, Hawfinch.—70, Serin Finch.—71, Cardinal Grosbeak.—72, Java Sparrow.—73, Waxbill.—74, Amandava.—75, Paradise Gros-beak.—76, Dominican Grosbeak.—77, Grenadier Grosbeak.—78, Cape Grosbeak.—79, Caffrarian Grosbeak.—80, Blue Gros-beak.—81, Azure blue do.—82, Yellow-bellied Grosbeak.—83, Gowry Grosbeak.—84, Banded Grosbeak.—85, Brown-cheeked Grosbeak.—86, Malacca Grosbeak.—87, Black clouded Gros-peak.—88, Red-billed Grosbeak. — 89, Snow Bunting.—90, Mountain Bunting.—91, Yellowhammer.—92, Common Bunting —93, Ortolan Bunting.—94, Cirl Bunting.—95, Foolish Bunting.—96, Reed Bunting.—97, Sparrow Bunting.—98, Whidah Bunting.—99, Dominican Bunting.—100, Shaft-tailed Bunting. —101, Indigo Bunting.—102, Painted Bunting.—103, Chaffinch, cut of nest, varieties of song. — 104, Mountain Finch.—105, House Sparrow.—106, Tree Sparrow.—107, Linnet.—108, Lesser Redpole.—109 and 110, Mountain and Mealy Linnets.—111, Gold-finches.—112, Siskin, or Aberdavine.—113, Ring Sparrow.—114, Citrel Finch.—115, Lapland Finch.—116, Snow Finch.—117 Canary, History, Diseases, Management ; Prize Canaries, &c. &c. ; German Paste.—118, Glossy Finch.—119, Purple Finch. 120, American Goldfinch.—121, Brazilian Finch.—122, Blue bellied Finch.—123, Liver-coloured Finch.—124, Green Gold-finches.—125, Angola Finch.	171
---	-----

SECTION 6. SINGING BIRDS. <i>Oscines.</i>	Term "Songsters," not applicable to all.—SWEET's Genus <i>Sylvia</i> .—Quotation from PLINY.—Species : 126, Skylark ; WORDSWORTH's lines.—127, Crested Lark.—128, Woodlark, Woodwele of the old ballads.—129, Shore Lark.—130, Titlark.—131, Field Lark.—132, Meadow Lark.—133, Water Lark.—134, Starling.—135, Water Ouzel.—136, Bohemian Chatterer.—137, Missel Thrush.—138, Song Thrush.—139, Fieldfare.—140, Redwing.—141, Blackbird, Merle and Woosel-cock of old writers.—142, Ring Ouzel.—143, Reed Thrush.—144, Rock Thrush.—145, Nightingale, variety of strains; BUFFON's description; SWEET's account; how to feed when fresh caught, by KIDD, &c.—146, Greater Nightingale.—147, Black-cap, SWEET.—148, Fauvette, or Pettychap, SWEET.—149, White throat.—150, White-breasted Warbler, or Babillard, SWEET.—151, Black, or Tithys Redstart.—152, Common Redstart, SWEET.—153, Dunnock, or Hedge Warbler.—154, Redbreast, COTTON and WORDSWORTH, &c.—155, Bluebreast, or Blue-throated Warbler.—156, Arbour Bird.—157, Reed Wren, SWEET.—158, Haybird, or Willow Wren, SWEET.—159, Rufous Warbler.—160, Sedge Warbler, SWEET.—161, Grasshopper Warbler, SWEET.—162, Wood Wren, SWEET.—163, Dartford Warbler, SWEET, Furze Wren, described by RUSTICUS.—164, Wren, KNAPP and WILLOUGHBY, Lines by BISHOP MANT.—165, Golden-crested Wren.—166, Whitetail, or Wheat-eat, SWEET.—167, Whinchat, SWEET.—168, Stonechat, SWEET.—169, Alpine Warbler.—170, Common Pied Wagtail, Dish-washer.—171, Grey Wagtail, cut of feet.—172, Yellow Wagtail, Spring Oatear.—173, Oxeye, or greater Titmouse.—174, Cole Tit.—175, Blue Tit.—176, Marsh Tit.—177, Crested Tit.—178, Bearded Tit.—179, Long-tailed Tit, or Mufflin	306
--	--	-----

SECTION 7. DOVES. <i>Columbae.</i>	Place of Doves in various systems.—Characteristics of the order.—Species : 180, Stock Dove.—181, Ring Dove.—182, Turtle Dove.—183, Collared Turtle.—184, Wild Rock Pigeon, original of the Domestic Pigeon, Varieties.	459
---	--	-----

SECTION 8. POULTRY. <i>Gallinæ.</i>	Term scarcely applicable.—Species : 185, Common Partridge.—186, Quail.—187, Rock, or Barbary Partridge...	473
--	---	-----

SECTION 9. WADERS. <i>Grallæ.</i> Called in Germany Stilt-walkers.	
Species : 188, White Stork.—189, Black Stork.—190, Wood-	
cock.—191, Snipe.—192, Lapwing.—193, Ruff.—194, Purr.—	
195, Moor Hen.—196, Corn Crake.—197, Water Rail.	480
SECTION 10. WEB-FOOTED BIRDS. <i>Anseres.</i> Species : 198, Swan.	
—199, Sheldrake.—200, Bean Goose.—201, Scaup Duck.—	
202, Mallard.—203, Tarrock.	486



INTRODUCTION.

I. OF CAGE-BIRDS IN GENERAL.

By the term *Cage-birds*,* I understand such as amateurs usually keep in confinement, for the sake of their beautiful plumage, their agreeable song, their lively disposition, or from the desire of studying their various peculiarities. For these purposes it is especially necessary to be able to distinguish between the sexes, since, as is well known, the males are, in almost every respect, more valuable than the females. I shall therefore in the following pages, pay particular attention to the varieties of colour, and other characteristics, by which this distinction may be effected. As, however, many birds are untameable, and many more would not repay the trouble necessary to tame them, the number of species which come within the scope of the present work is very small, when compared with the whole number known to the ornithologist.

II. OF THE VOICE AND SONG OF BIRDS.

EVERY species of bird has a peculiarity of voice possessed by no other. By this variety of vocal endowment, birds are not only distinguished above the rest of the animal creation, but are enabled to express to one another their wants and passions. There can be no doubt that this power of communication exists not only between the sexes, but between all individuals of the same species. The least experienced observer of nature knows that the approach of danger is expressed by a universally intelligible cry ; which, if uttered by the Wren, for instance, is understood by the Turkey-cock, and *vice versa*. Of whatever species the one may be, which first perceives the approach of a bird of prey, it is able to excite the attention of all birds in the neighbourhood by its peculiar cry of warning. As soon as the Blue-tit utters her *Iss!* so indicative of fear and terror,—which, nevertheless, she seems sometimes to do from pure love

* The German word is *Stübenvögel*, which, translated literally, is *chamber-birds*; but as these chambers are, so to say, cages on a large scale, the translator has preferred the term *Cage-birds*.

of mischief,—the wood is silent in an instant ; and every bird either listens for the enemy's coming, or hastens to the aid of the comrade who is attacked. This peculiarity is so marked, that fowlers have not failed to turn it to purposes of profit. They build a hut, roof it with green boughs, and cover the roof with a plentiful supply of limed twigs. They then display a Screech-owl or other bird of prey, imitate the sonorous cry of a Jay or Woodpecker in fear and distress ; and birds of every size and species flock to the hut, and are caught.

The tones of happiness and joy, by which one bird is able to call forth from another a similar expression of feeling, seem to be almost as universally intelligible. Nor is this joy shown by song alone ; although when one little creature begins to sing, the whole wood, or the whole room, soon manifests its sympathy by a general chorus. The same is frequently indicated by single notes. In spring and autumn, a great variety of species may often be noticed in hedges and bushes, which seem to take great delight in the utterance of a common cry. Again, when in confinement, birds may often be induced to sing by various noises, loud conversation, and above all, by instrumental music ; though on wild birds these means would produce no other effect than to frighten them away.

In many cases also different species have a language, which serves for various purposes of mutual communication. For instance, Ravens, Crows, Jackdaws, &c., understand and respond, both by voice and action, to each other's call. By imitating the call of the Yellow-hammer, the fowler succeeds in taking the Orlolan, the Snow-bunting, the Reed-bunting, the Foolish-bunting, &c. : the cry of the Chaffinch decoys the Mountain-finch ; and that of the Siskin attracts the Citron-finch and the Redpole.

Lastly, every bird has received from nature the power of uttering either a song, or certain distinct sounds, by which it can communicate its desires not only to those of its own, but of other species. These notes, if connected in a melodious succession, are called *a song* ; if unconnected, *a call*. In some cases the call is the same, however different the emotions which it is intended to express : in others, it is very various. For instance, the Chaffinch's call, when on the wing, is *Eyak ! eyak !* its expression of joy is *Fink ! fink !*—if angry, the same syllable is repeated more quickly ; and *Trief ! trief !* is the sign

of tenderness or melancholy. The Raven's call—*Graab! graab!*—is, on the contrary, the same under all circumstances; and the only indication of a change of emotion, is the degree of rapidity with which it is uttered.

What is called the Song of birds, is, in all cases, expressive either of love or happiness. Thus, the Nightingale sings only during the pairing season, and the period of incubation, and is silent as soon as compelled to feed its young; while, on the contrary, the Starling, the Bullfinch, and the Canary, sing throughout the year, except when dejected by moulting. It seems, in general, to be a prerogative of the males, by which they either invite or seek to retain the affections of the females. There are indeed a few species, *e. g.* the Redbreast, Lark, Canary, &c., the females of which, especially if kept by themselves, manifest a capability of uttering a few notes like those of the male; but in general they only listen to the song of the males, in order to show their preference for the most accomplished singer. In a cage of Canaries, the liveliest female always pairs with the best singer; and a female Chaffinch, when wild, will choose out of a hundred males, the mate whose song is most pleasing to her.

The Songs of Cage-Birds—which, as we have already said, constitute their chief recommendation to the amateur,—are divided into two classes; the natural and the artificial. The former are as various and as numerous as the species of birds themselves; and I know of no two of our indigenous birds, which exactly resemble each other in this respect. Even the case of the Shrikes, which, on account of their very retentive memory, perfectly succeed in reproducing the songs of the birds whose nests are near their own, forms no exception; as they so interpolate the imitated song with their own notes, that a connoisseur soon discovers whether he is listening to a Woodchat Shrike, or a Skylark. A knowledge of the different songs is of great importance, not only to the amateur but to the naturalist, as many important observations relating to the habits of the feathered tribe can be made, and classified only, by means of their song.

The artificial song consists in part of notes peculiar to other species, which young birds spontaneously acquire in the aviary, or of passages which have been purposely performed in their hearing on a flute or bird-organ. Almost all singing

birds, which have been taken from the nest when very young, are able to retain portions of such tunes as are daily played or whistled in their presence; but only a few, particularly distinguished for docility, entirely forsake and forget their natural song. A young Goldfinch, for example, learns passages of the airs which are being taught to a Bullfinch in the same room; but is very far from ever equalling the latter in the perfectness of his repetition. Nor can this be accounted for, as many suppose, by the greater or less plasticity of the organs of voice, but must be attributed rather to the various degrees of memory with which different birds are endowed. There are also certain species, such as Parrots and Jays, which have a broad, undivided tongue, enabling them to imitate articulate sounds; these are said to speak.

Birdsellers and amateurs, however, classify the Songs of birds in the following manner:—The bird *warbles* or *quavers*, when it always repeats the passages or single notes of its song in precisely the same order; such is the song of the Nightingale and the Chaffinch. It *sings* when it utters the chirping or twittering song, intermixed with most distinct notes, without observing any regular succession, as is the case with the Redbreast and Siskin. And then only it *whistles* or *pipes*, when its song consists of distinct, round, flute-like notes; as, for instance, that of the Linnet and the trained Bullfinch.

Some birds sing throughout the day; some are heard early in the morning; others in the evening; and a few seem to prefer the silence of night. Some prefer to sing in company; others are mute except when alone. The Nightingale, for instance, is silent in the daytime, and sings only in the evening, or even at night. It seems indeed as if the queen of Song Birds was conscious of the superiority of her powers, and disdained to raise her voice amid the various noises of day, and the cry and twitter of other birds, but reserved it for a period when it could be better heard and more fully appreciated by men.

It is remarkable, that all birds which, unlike the Redbreast, Siskin, or Bullfinch, do not sing throughout the year, appear to forget their song during the process of moulting, and have to learn it again every spring. The fact, however, does not seem to me, to be thus rightly described. The practising, which goes by the name of learning, or *recording*, is only a kind of exercise of the organs, in order that they may again easily produce the accustomed tones; and consists, not of notes or passages which

have any reference to the usual song, but of a kind of twittering and chirping, intermixed with which, the well known notes are now and then to be detected, given on every occasion with increased perfectness and facility. The Chaffinch, before recovering its song, chirps for eight weeks, though the period varies slightly in individual birds ; and the warbling of the Nightingale is indistinct for an equal length of time. This recording, therefore, seems to indicate, not so much a failure of memory, as, if I may so speak, a deterioration in the organs of voice.

The reason why one bird sings better than another, may be found in the different size and strength of the larynx ; whence arises also the fact that females but rarely sing, as this organ is much less fully developed in them than in the male. Thus too, the Nightingale, distinguished above all birds by its clear, loud and long song, differs also from all others in the greater strength and size of its larynx. Like other organs, however, the larynx may be very much strengthened by practice ; and, as we see in the case of Chaffinches, Linnets, and Bullfinches, which have been reared in the aviary, care, good food, and instruction, will materially improve the song of many birds.

I must not omit to mention in this place, a remark of BARRINGTON's (*Philosophical Transactions*, vol. lxiii. 1773), namely, that the so-called wild, or natural, song of a bird might be artificially improved by the admixture of another—as, for instance, by keeping Linnets, Sparrows, &c., in an aviary with cage-birds, such as the Nightingale and Canary, and then setting them at liberty. It is true enough that the songs of such birds improve in the aviary ; for being well tended and fed, they have nothing to think of but their song, and the effort to procure a mate by its mean. And by putting them into an aviary constructed of wire, in the open air, and hanging near it, in cages, unmated birds, of such species as the Nightingale and Canary, which sing without intermission, it might be possible to teach them a new and better song ; although that the same course of instruction could be given in the house, as HERR GAINBORG affirms,* is a supposition against which all my own experience militates. For it would be possible only in the case of birds which pass the winter in the neighbourhood of our dwellings,—such as Sparrows, which are, however, among the least docile of

* "How can we Improve the Song of our Wild Birds?" Copenhagen, 1800.

the feathered tribe. Again, the birds which are to learn a song not natural to them, must be taken from the nest before they have even learned to chirp ; and if thus brought up to the food and the temperature of the aviary, would be able neither to sustain life, nor to migrate in winter. And thirdly, if such birds were hatched by cage-birds—Canaries for instance—they would become accustomed to the food of the aviary, but when winter came, would be entirely ignorant of the cry of their wilder comrades; could not migrate with them; and must therefore perish of hunger. The only means of accomplishing the proposed object, which seems to me feasible, would be to take trained birds,—of such species as frequent our orchards and gardens, Larks, Finches, &c.—and hang them in cages near the spot where others had built. Then the nestlings which happened to possess a good memory, would be able to recollect the improved song of the trained birds, as well as that which they acquired from their parents. Whether the attempt to improve the natural melody of our woods and gardens, be advisable, may I think be questioned. It is sufficient to keep birds of curious or peculiarly beautiful song in the aviary, and thus to derive pleasure from their strains.

ADDITIONAL REMARKS.—“The melody of birds,” says BORDERIP, in his *Zoological Recreations*, “finds its way to the heart of every one ; but the cause that prompts the outpourings that make copse, rock, and river, ring again on a fine spring morning, is more a matter of doubt with ornithologists, than the uninitiated in zoological mysteries might suppose. Much has been written on this subject, and upon a consideration of the different opinions, aided by our own observations, we are inclined to think that love and rivalry are the two great stimulants, though we do not mean to deny that a bird may sing from mere gaiety of heart, arising from finding itself in the haunts dear to it, and in the midst of plenty of the food it likes.

“In this country, the season of reproduction is undoubtedly that wherein

‘The isle is full of pleasant noises,
Sounds, and sweet airs, that give delight ;’

and about ten weeks have been mentioned as the period during which most of our wild birds are in song. That there are exceptions to this rule, there is no doubt. We have heard a wild Thrush, one of the sweetest singers of his tribe, sing far into September, but we watched narrowly, and never could find that

he had a mate. Then, again, we have the autumnal, and even the winter notes of the Robin, long after the breeding season ; and caged birds, if well fed and kept, will sing the greater part of the year."

No British naturalist appears to have paid greater attention to this part of our subject than Colonel MONTAGUE, and his remarks thereupon are exceedingly interesting. "There is no doubt," he says, "that birds in confinement will learn the song of those they are kept with ; but then it is constantly blended with that peculiar to the species. In the spring, the very great exertions of the male birds in their vociferous notes are certainly the calls to love ; and the peculiar note of each is an unerring mark for each to discover its own species. If a confined bird had learned the song of another, without retaining any part of its natural notes, and was set at liberty, it is probable it would never find a mate of its own species ; and even supposing it did, there is no reason for believing the young of that bird would be destitute of its native notes ; for if nestling birds have no innate notes peculiar to their species, and their song is only learned from the parent bird, how are we to account for the invariable note each species possesses, when it happens that two different species are bred up in the same bush, or in the contiguous one, or when hatched or fostered by a different species ? The males of song birds do not in general search for the female, but, on the contrary, their business in the spring is to perch on some conspicuous spot, breathing out their full and amorous notes, which, by instinct, the female knows, and repairs thither to choose her mate. This is particularly verified with respect to summer birds of passage. The Nightingale, and most of its genus, although timid and shy to a degree, mount aloft, and incessantly pour forth their strains, each seemingly vieing in its lone, love-laboured song, before the female arrives. No sooner does the female make her appearance than dreadful battles ensue—their notes are changed ; their song is sometimes hurried through without the usual grace and elegance ; and at other times modulated into a soothing melody. The first we conceive to be a provocation to battle at the appearance of another male ; the last, an amorous cadence, or courting address. This variety of song only lasts till the female is fixed in her choice, which is in general a few days after her arrival ; and if the season is favourable, she soon begins the task allotted to her sex.

"The male no longer exposes himself as before, nor are his songs heard so frequently, or so loud ; but while she is searching for a secure place in which to build her nest, he is no less assiduous in attending her with ridiculous gestures, accompanied with peculiarly soft notes. When incubation takes place, the song of

the male is again heard, but not so frequently as at first; he never rambles from hearing, and seldom from her sight, and if she leaves the nest, he accompanies her with soft notes of love.

"The continuation of song in caged birds by no means proves it is not occasioned by a stimulus to love; indeed, it is probable that redundancy of animal spirits from plenty of food and artificial heat may produce the same result, whereas wild birds have it abated by a commerce with the other sex;—but even in their natural state, birds may be forced to continue their song much longer than usual. A male Red-start made his appearance near my house early in spring, and soon commenced his love-tuned song. In two days after a female arrived, which for several days the male was continually chasing, emitting soft interrupted notes, accompanied by a chattering noise. This sort of courting lasted for several days. Soon after, the female took possession of a hole in a wall close to my house, where she prepared a nest, and deposited six eggs. The male kept at a distance from the nest; sometimes sung, but not so loud nor so frequently as at first, and never when he approached the nest. When the eggs had been sat on a few days, I caught the female. The male did not miss his mate immediately; but on the next day he resumed his vociferous calls, and his song became incessant for a week, when I discovered a second female;—his note immediately changed, and all his actions as before described returned. This experiment has been repeated on the Nightingale with the same result; and a Golden-crested Wren, who never found another mate, continued his song from the month of May till the latter end of August. On the contrary, another of the same species, who took possession of a fir-tree in my garden, ceased its notes as soon as the young were hatched."

In his comments upon the above, Mr. RENNIE expresses an opinion, that birds sing most frequently from joy and buoyancy of spirits; and not unfrequently in triumphant defiance of rivalry or attack. He says, "I have a Red-breast who will sing out whenever I snap my fingers at him, and the Sedge-bird sings when a stone is thrown into the bush where he may be."

According to SYME, the Song of birds may be divided into six distinct utterances:—*first*, there is the call-note of the mate in spring; *second*, the loud, clear, and fierce notes of defiance; *third*, the soft, tender, full, melodious love-warble; *fourth*, the notes of fear, when danger approaches the nest; *fifth*, the note of alarm, or war-cry, when a bird of prey appears; *sixth*, the note the parent birds utter to their brood, and the chirp or note of the young. This latter he again divides into two—that which the young birds utter while in the nest, and that after they have left it. And to these several utterances, he adds the

soft murmuring kind of note which the male emits while he is feeding the female on the nest, and also that uttered by her while receiving the food.

The Hon. DAINES BARRINGTON remarks, that "some passages in the song of a few kinds of birds, correspond with the intervals of our musical scale; but that much the greater part of such a song is not capable of musical notation, because—first, the rapidity is often too great, and it is also so uncertain where they may stop, that it is impossible to reduce the passages to form a musical bar in any time whatsoever: secondly, on account of the pitch of most birds being considerably higher than the most shrill notes of instruments of the greatest compass; and lastly, because the intervals used by birds are commonly so minute, that we cannot judge at all of them from the more gross intervals into which our musical octave is divided." We cannot follow this accomplished naturalist through the whole of his interesting observations upon this subject. The table which follows will serve to show his estimate of the comparative merits of some of our leading feathered vocalists.

MR. DAINES BARRINGTON'S TABLE.*

	Mellowness of tone.	Sprightness.	Plainness.	Compass.	Execution.
Designed to exhibit the comparative merit of British Song Birds: Twenty is supposed to be the point of absolute perfection.					
1 Nightingale	19	14	19	19	19
2 Black-Cap, or Mock Nightingale.	14	12	12	14	14
3 Skylark.	4	19	4	18	18
4 Woodlark	18	4	17	12	8
5 Titlark	12	12	12	12	12
6 Linnet	12	16	12	16	18
7 Goldfinch	4	19	4	12	12
8 Chaffinch	4	12	4	8	8
9 Greenfinch	4	4	4	4	6
10 Thrush.	4	4	4	4	4
11 Blackbird	4	4	0	2	2
12 Robin	6	16	12	12	12
13 Wren	0	12	0	4	4
14 Hedge-Sparrow	6	0	6	4	4
15 Reed-Sparrow	0	4	0	2	2
16 Aberdavine or Siskin	2	4	0	4	4
17 Red-Pole	0	4	0	4	4

* We quote this Table more as a curiosity than as an authority, as we think the estimate in many respects very defective: for instance, the Robin is placed much too high in the scale, and the Thrush and Blackbird as much too low; for mellowness,

In MACGILLIVRAY's description of the structural anatomy of the organs of tune in birds, we find it stated that the *trachea* is an elastic tube, very flexible and contractile, so that it can accommodate itself to the various motions of the neck ; it is covered with layers of cellular tissue, and commences just behind the tongue, extending downwards to opposite the first rib, where, at the *syrinx*, as it is called, or inferior *larynx*, it is divided into two *bronchii*. The parts which correspond with these in man and animals are proportionably larger and more complex, because with them the varieties of tone in the voice are produced by the muscles and chords of the *larynx* ; whereas in birds, the sound is produced at the *syrinx*, or lower extremity of the wind-pipe, the modulations being caused by the contraction and extension of the *larynx*. The vocal chords which vibrate under the impulse of the air, and so produce sound in the human *larynx*, are placed in that organ. But in the case of birds the vibrating membrane is placed in the lower *larynx*, or, more properly speaking, the *syrinx*. Such then is the apparatus by which the voices of birds are attuned, and this is the *modus operandi* :—when the air contained in the lungs and air-cells passes through the *bronchii*, it causes the vocal membrane at the extremity to vibrate, and the sound which is thus produced is rendered acute or grave, by the relaxation or tension of the parts ; while the stream of air thus caused to vibrate is narrowed and divided, or suffered to pass free, according as the muscles of the *larynx* are tightened or relaxed. This author cannot, however, in his careful anatomical researches, find an adequate cause for the great variation observed in the songs of different birds. He says : "The modification of these organs presented by the different species are slight ; the parts in all I have examined, being the same, and with the same number of muscles. The peculiar song of different species must therefore depend on circumstances beyond our cognition ; for surely no one could imagine the reason that the Rook and the Hooded Crow require as complex an apparatus to produce their unmusical cries, as that which the Blackbird and Nightingale employ in modulating their voices, so as to give rise to those melodies which are so delightful to us ; and yet the knife, and the needle, and the lens, do not enable us to detect any superior organization in the Warbler over the Crow."

By some authors the superior powers of song manifested by

at all events, they are entitled to a higher place ; and then, why was not the Bullfinch included, and several other very sweet songsters, whose names do not appear ? Great difference of opinion will, of course, at all times prevail, respecting the comparative merits of the various individuals of the feathered choir : so much depending upon the taste and temperament of the hearer, and the circumstances under which they are heard, as well as upon the state, and condition, and opportunities of improvement which the singer has enjoyed.

certain birds, is ascribed to the possession of a greater degree of nervous energy ; but there are difficulties in the way of such a solution of this problem, one of the many which the practical naturalist has yet to solve. Many attempts have been made to express in words, or in the characters used in musical notation, the varied strains of the feathered songsters ; but such attempts have been, and must be, partially if not wholly, failures. BECHSTEIN has taken great pains to spell out the different notes of the nightingale, and set them down in their proper order of sequence, dividing them into their separate strains, or strophes ; but let any lover of the dulcet jargoning of that "sweet and plaintive Sappho of the dell," look upon the following strange jumble of letters, and tell us what resemblance the sounds which they express, bear to the enchanting music to which he has often listened in an ecstasy of delight :

The French poet understood this matter better, when he said of his mistress, that her name was *the note of a nightingale*, which saying reminds us of the lines of an English child of song, who describing *his* lady-love, averred that—

"Her thoughts were garlands of new tinted flowers,
Their utterance perfume."

No, the melody of birds, like the fragrance of flowers, cannot be described ; it must be listened to, and that by one whose senses are properly attuned to outward harmony, by an in-dwelling and abiding love of the beautiful and the pure in nature : to him the soaring Lark will seem indeed to pour forth at heaven's gate a morning hymn of praise, and the nightingale to chant, amid the leafy woodlands, a vesper song of thankfulness : the full chorus of feathered minstrelsy will be to him like an angel choir, scattering melody on all around, which sinks into the soul like summer rain into the earth, gladdening and refreshing it.

III. HABITATION AND GENERAL TREATMENT.

THE space required by cage-birds varies with the different species, and the object with which they are confined. As far as health and happiness are concerned, all are better in a room, of which they have the entire range, than in a cage. This room should be provided with boughs of fir and pine, which ought to be cut in winter, or at the latest in March, in order to prevent the leaves from falling off. Many species, however, sing better when confined within so narrow a space, that they can only communicate with their fellows by means of song.

Those birds which are kept only for their beauty, or the elegance of their motions, should be kept in a room where they can hop or fly about, and may perch at night either on the above-mentioned pine boughs, or in a large cage, with numerous divisions. Many birds—as, for example, the Hedge-Warbler and the Blue-throated Warbler—sing better in this modified species of liberty, than if confined in a cage. In the case of those which, for their song's sake, it is advisable to restrain within narrow bounds, the species of cage best adapted for them depends on their natural habit of life, and the degrees of liveliness in their disposition. A Lark must have a large, a Chaffinch a small cage. A further question regards the introduction of perches, which is decided by the bird's habit when at liberty;—whether or not it lives on the ground. Such perches are never placed in a Lark's cage, though indispensably necessary in one intended for a Nightingale.

Under all circumstances, *cleanliness* is an essential requisite for the longevity of birds, as well as for their preservation in health and spirits. Every fortnight at least—were it done every week the birds might be too much disturbed—all cages should be cleaned, all perches freed from dirt, and fresh river sand strewed over the floor of the aviary. If this be not done, not only does the general health of the little captives suffer from the strong odour of the dung, but the feet, to which it adheres, become lame; gout and other diseases ensue, and the loss of one or more claws is frequently the result. It must be observed, however, that before cleaning a bird's feet, it is necessary to dip them in water, as otherwise the adhesive dirt is apt to bring the skin with it;—a sore which not only produces

lameness, but often attracts to itself the diseased humours necessarily engendered in the body by the unnatural habit of life. The feet, indeed, are the seat of most of the diseases incident to cage-birds; and it is often necessary to examine them minutely—as a hair twisted round a claw eats so deeply into the flesh, as frequently to result in the drying and dropping off of the part. Attention to this point is rendered all the more important, and may be enforced by the fact, that it is rare to see a cage-bird of any age, which has its full complement of claws. It cannot, however, be denied that there is not only a difference between species, but between individual birds in this respect; some carefully keeping themselves clean—others not even taking the trouble to cleanse their feet, beak, or wings. I have always found Yellow-hammers, Reed-buntings, Bullfinches, and Redpoles exceedingly clean birds; whereas, on the contrary, Larks and Fauvettes allow their feet to be constantly full of dirt, and even suffer them to ulcerate and drop off, before they will take the trouble to remove the offending matter.

Many lovers of birds find pleasure in rendering them so tame, that they may be taken on the hand into the open air; or be let fly, and again recalled. One of my friends, who has succeeded in taming not only birds, but also otters, adders, weasels, foxes, and martins,—so that they follow him wherever he goes, and obey the slightest sign of command,—makes use of the following method, which, from my own experience, I can assert to be easy and certain. If the object of the experiment be a bird, he opens the door of the cage, and teases it with a soft feather. This he does till the bird pecks at the feather, then at his finger, and at last comes out of the cage and perches upon his hand. He then smooths its feathers down, caresses it, and offers it some favourite article of food, which it soon learns to take from his hand. He then begins to accustom the bird to a particular call or whistle; carries it upon his hand or shoulder from room to room, in which all the windows are carefully closed, lets it fly, and calls it back. As soon as the bird becomes obedient to the call, in the presence of other persons and animals, the same experiment is cautiously repeated in the open air, till at last it is rewarded with complete success, and the bird refuses to forsake its master, either in a large company, or among the temptations of the garden. This process is particularly adapted for young

Linnets, Bullfinches, and Canary-birds; but in spring, or pairing time, it is necessary to guard against taking birds so tamed into the open air, where they are likely to hear the cry of their wild comrades. This is the season during which they most commonly relapse into their former wildness.

A new and approved method of completely taming all kinds of cage-birds, in the course of one or two hours,—with which I have only lately become acquainted,—is the following:—

A portion—larger, or smaller, in proportion to the wildness of the bird—is cut off from the inner plume of the pen feathers, so that the bird cannot hurt itself if it attempts to leave the hand, and the external appearance of the wing is not impaired. The nostrils of the bird are then touched with bergamot, or any other odorous oil, by which it is for a time so stupefied, as to perch quietly on the finger, or to hop from one finger to another. It may indeed attempt to fly away once or twice; but this is not often repeated, especially if the experiment be tried in a dark place—as, for example, behind a curtain, which offers the further advantage, that if the bird fall, it is not likely to hurt itself. As soon as it sits quietly on any one finger, another finger must be placed in such a position as to cause the bird to step upon it; and so soon as it is accustomed to hop quietly from one finger to another, the main difficulty is overcome. For if when the bird is gradually aroused from its state of stupefaction, it perceives that its teacher does not use it roughly, it may by degrees be taught to manifest perfect obedience to his commands. To teach it to eat from its master's mouth, it should be kept in the cage without food for some time. If it be then taken upon the finger, and its favourite food be presented to it on the outstretched tongue, hunger will soon teach it to feed.

Birds tamed in this manner may easily be taught to sing, while perched on the hand. To effect this, it is only necessary to coax them by the appropriate tones, gestures, and caresses. The Chaffinch may be made to sing by whistling *Yach! yach!* and stroking it on the neck; and the Bullfinch, by speaking to it in a friendly manner, accompanied by a backward and forward motion of the head. A considerable degree of perseverance is, however, in all cases, essential to the success of this method of taming birds.

IV. Food.

THE chief consideration to be attended to, in choosing food for the various species of cage-birds, is to select that which bears the closest resemblance to their natural diet. In many cases, this is exceedingly difficult, and in some impossible ; as, for instance, how can we procure the seeds on which many of the East India birds, which adorn our aviaries, are accustomed to feed ? And thus a great obstacle in the way of our success is to accustom cage-birds, or rather their stomachs, to such food as we are compelled to offer them ; though there are birds, it is true, such as Chaffinches, Yellow-hammers, Thrushes, &c., which as soon as they are brought to the house, eat without hesitation or detriment, whatever is given to them. Others, however, are more delicate, and at first, partly from grief, and partly from want of their usual fare, will eat nothing. It is indeed considered a bad sign if such birds as are generally accounted delicate, begin to eat greedily as soon as put into the cage—as it is thought to indicate an unnatural indifference at the loss of freedom, which can only proceed from disease. If, on the contrary, they sulkily hide themselves in a corner for some hours, there is little need to be anxious about them, as when the sulky fit is allowed to wear itself off, they usually begin to eat heartily. On this subject Dr. MEYER of Offenbach writes to me as follows : An almost infallible method of inducing fresh-caught birds to take the food of the aviary, is to leave them undisturbed for some hours in a cage, where water and the appropriate food are easily accessible. If the bird do not eat, it is to be dipped in fresh cold water, and replaced in the cage. It will sit for a few moments apparently quite exhausted, but will soon recover and begin to plume itself, and after a minute or two will become exceedingly lively, and begin to eat. The appetite thus incited in birds by the use of the bath, is analogous to the same phenomenon in the human being.

In order to elucidate the general rules which I shall give, as to the Food of cage-birds, I have divided them into four classes : First, such as eat only seeds, as Canaries, Bullfinches, Siskins, Linnets, Goldfinches, &c. Second, such as eat both seeds and insects, as Quails, Larks of every species, Yellow-hammers, and the various kinds of Tits. Some of the last-mentioned species, however, partly subsist upon berries. Thirdly, such

as eat insects and berries, as Nightingales, Redbreasts, Thrushes, Blackcaps, &c. Fourth, such as eat insects only, as Wagtails, Fieldlarks, Whitetails, Blue-throated Warblers, &c. Birds of the fourth class are the most difficult to preserve in health ; and yet, as their song is in general not remarkable for beauty, they by no means repay the trouble which must be expended on them. To meet this difficulty, it is a good plan, in spring, to collect, dry, and store up for use the flies which may be found in great numbers in the windows of old buildings. At the season, therefore, when living insects cannot be procured, these flies may be mixed with the paste which I am about to describe ; and which, with the occasional addition of a few ants' eggs, or meal-worms, may be considered as an universal diet for all delicate birds. Let a supply of wheaten bread, sufficient for three months' consumption, be baked without salt. When the loaves have become stale, they are again to be put into the oven when a batch of bread has been withdrawn, and allowed to remain while it gradually cools. They may then easily be pounded into a species of meal, which will keep good for a quarter of a year. Of this, a large tea-spoonful is allotted for the daily portion of each bird, and mixed with three times the quantity of warm milk, which in no case, however, must be allowed to boil. A stiff paste is the result, which may be cut into small pieces on a board, is very nourishing, and never becomes neither sour nor sticky, even in the hottest weather. In the case of delicate birds, a few flies, or chopped meal-worms, may, as before said, be mixed with this paste.

With respect to the first class, experience teaches that Canaries prefer a mixture of canary, summer-rape, and crushed hemp seed ; Goldfinches and Siskins poppy seed, now and then mixed with a little crushed hemp seed ; Linnets and Bullfinches rape seed alone. Besides this, all require an occasional supply of green food—cabbage, and lettuce leaves, and water-cress—as well as river sand, which is highly useful in the process of digestion, and with which the floor of their cage should always be kept strewed. Among birds of the second class, Quails are fond of wheat and bread crumbs ; Larks prefer barley meal mixed with cabbage and water-cress cut small, or poppy seed and crumbs of bread, or in winter, oats ; Chaffinches like rape seed in summer, sometimes mixed with a little hemp seed ; Yellow-hammers are fond of the same diet as the Larks, with the exception of the green food ; and the various species of Tits eat

fir seeds, hemp seed, oats, meal, lard, bread, hazel and walnuts. All birds of the first and second classes are easily preserved alive, except when taken in the pairing season, in which case they sometimes die of hunger and grief for the loss of their freedom.

Although I have always felt a repugnance to all appliances and remedies which claimed to be universal, I am emboldened, by a very long experience in the management of cage-birds, to recommend two *Universal Pastes*. That these pastes are not wrongly designated by the name "universal," is proved by the fact, that all my birds, except those which, for their song's sake, are kept in separate cages, are fed, and thrive upon them. They are besides recommended, not only by their cheapness and simplicity, but by the considerable saving of time effected in the case of any amateur, who has a numerous collection. The receipt for the first is as follows: Take, and thoroughly soak in cold water, a well-baked stale wheaten loaf, then press the water out, pour milk over it, and mix with it two-thirds of its own weight of barley or wheat meal, well ground and sifted.

The second is made thus: Grate a carrot (which may be kept in sand, in a cool place, a whole year) on a grater, which, to fit it for future use, must be immediately washed quite clean; then thoroughly soak a penny roll in water, press the water out, and mix both bread and carrot with two handfuls of the above-mentioned wheat or barley meal. The whole must then be well pounded in a mortar.

It must, however, be observed, that both these pastes ought to be made every day, as they soon become sour, and therefore unwholesome for the birds. I myself keep this food in a long earthen vessel, out of which about half my birds can feed at once. An earthen vessel is better than a wooden one, because it is not only easier to be cleaned, but because it preserves the food sweet for a longer period. I feed my birds—of which from thirty to forty are generally in possession of my room—on the first-mentioned paste; on which they thrive so well, and preserve so perfectly the beauty of their plumage, that no one would suppose them to be captives. All birds, whatever may be their natural diet, eat it willingly; and there may be seen in my room, Chaffinches, Linnets, Goldfinches, Siskins, Canaries, Redbreasts, Larks of all kinds, Quails, Yellow-hammers, Ortolans, Buntings, Hedge-warblers, Redtails, &c., all feeding out of

a single trough. A little hemp, poppy and rape seed, and a few ants' eggs and bread crumbs, may be occasionally added as a treat. The same pastes suffice also for birds of the third and fourth classes.

In addition to this, all cage-birds need a fresh supply of water every evening—not only to quench their thirst, but, in many cases, to bathe. If a considerable number of birds inhabit the same room, the best plan is to provide for them an earthen vessel, about eight inches in length, and two inches in breadth and depth, divided into several compartments, so that the birds cannot entirely immerse themselves, and scatter the water about with their wings. For Quails and Larks, fresh wet sand is sufficient. A general rule as regards birds—but one which especially applies to such as will eat whatever is offered them—is that great care is necessary not to give them meal which is at all bad, or which has any pepper upon it. I may also remark, that it is the best plan not to give cage-birds a larger supply of food than is sufficient for one day; as they are apt not only to waste it by scattering it about the cage, but also to pick out the best, and leave themselves poorly provided for the future.

V. BREEDING OF CAGE-BIRDS.

It is neither necessary nor possible to make many general remarks on the Breeding of Cage-Birds; as, with the exception of Canaries, which may almost be reckoned among domestic animals, it is very rarely that they can be induced to pair. A chief requisite is a quiet, solitary, and roomy habitation ; if possible, a whole room, in which have been placed pine-boughs cut in winter, and retaining *their* leaves. It is especially necessary to make the habitation resemble as much as possible the natural haunts of the birds, in order that they may have the greater inducement to pair.

As, however, we cannot under any circumstances, and with any degree of care, supply the advantages afforded by nature, or provide the necessary materials for building, it is best to give them nests turned out of wood, or woven of straw or withes. In these the birds will themselves arrange the softer materials, such as hair, silk, and lint, which should be placed within their reach. Great attention must also be paid to their food at this period ; to supply such as shall at once incline the old birds to pair, and be appropriate to the age of the young brood. I shall give

particular directions on this head, in my account of each separate species.

It is also necessary to mention the time at which young birds, which it is desired to rear in the aviary, should in general be taken from the nest. This is, when the tail feathers are just beginning to grow, while the other feathers are commencing to expand themselves, and the eyes are not yet quite open. If they are taken before this time, their stomachs are not strong enough to bear the change of food; if after, it is with great difficulty that they can be induced to open their beaks, to receive food with which they are unacquainted. Some species, however, may be tamed, and will allow themselves to be fed, at any period of life.

VI. DISEASES OF CAGE-BIRDS.

LIKE all domestic animals, birds in confinement are more subject to disease than they would be in their natural state of life; although the assertion that wild birds are never attacked by any ailment, is altogether unfounded. I have myself often seen the Hedge-warbler, for example, completely covered with pimples, especially on the feet and round the beak. There is no doubt, however, that most of the disorders of Cage-Birds proceed from two causes, in part incidental to their condition; first, the narrow space within which they are confined, and consequent want of exercise; and secondly, the sugar, confectionery, and other dainties often given to them, which impair the digestive powers, and frequently result in decline.

I have here enumerated the results of my own experience as to the chief Diseases of Cage-Birds, and the most effectual remedies for them. As, however, the food of different birds is not always the same, a different mode of treating their ailments is often necessary. In any case, therefore, where the general directions which I subjoin do not appear sufficient, I shall append to my account of the bird a statement of the diseases to which it is particularly liable, and the treatment rendered necessary by the nature of its food.

1. THE PIP. This is properly a cold, in which the nostrils are stopped up, and the external skin of the tongue hardened by inflammation. In the case of large birds, it is the best plan to remove the hardened cuticle, beginning on the lower side, near the palate; an operation by which the pores of the skin

are re-opened—the saliva necessary for digestion is enabled to be secreted—and the sense of taste, and consequent appetite, restored to the bird. A pill of butter, garlic, and pepper, generally completes the cure by removing the catarrh ; and its operation will be aided by allowing the patient to sip an infusion of speedwell. The stoppage of the nostrils may be cured by drawing a fine feather through them. The symptoms of the Pip are:—a dryness of the tongue ; a yellowness at the root of the beak ; a roughness on the feathers of the head; and a frequent gasping, as if for breath.

2. COLD, OR RHEUM. For this disease, which shows itself by frequent sneezings and shaking of the head, I know no better remedy—especially if the bird be valuable, and it is thought inadvisable to leave the malady to the healing operations of nature—than to give it a few drops of pectoral elixir in an infusion of speedwell. I have given fowls as many as twenty drops of this medicine.

3. DECLINE. This disease—the symptoms of which are a general roughness of the feathers, a great appetite, and yet a gradual wasting of the flesh—is usually the result of an unnatural diet, which impairs the digestive powers. The most effectual remedy, besides supplying the patient with the best and most natural food, is to force it to swallow a spider, which acts as a purgative, and to put a rusty nail into its water, which seems to give vigour to the stomach and bowels. In the case of birds which occasionally require green food, watercress is a specific against Decline. I once fed a Siskin, which was reduced to a deplorable condition, on water-cress for three days, and on the fourth was gratified by hearing its song once more.

4. COSTIVENESS. This disease is easily detected by the frequent fruitless attempts of the bird to void its excrements. If a spider, as above prescribed, be not efficacious in remedying this, it is best to apply, with a blunt pin, a clyster of linseed oil ; a means which rarely fails of effect. If the bird be accustomed to eat meal worms, one of these insects, bruised with saffron and linseed oil, will be readily swallowed, and prove an infallible remedy.

5. DIARRHÆA. This very fatal disease is exceedingly common among newly-caged birds, which have not yet become accustomed to the food of the aviary. They constantly void a white

chalky matter, which adheres to the feathers of the tail, and is so acrid, as to produce a painful inflammation in and about the rectum. The use of the rusty nail in the water, and the clyster of linseed oil, as mentioned above, sometimes tend to mitigate the disease ; but I have found that the only effectual method of relieving the sick birds, is to procure them such food as is most congenial with their natural habits. Many persons pull out the feathers of the back and tail, and smear the parts with fresh butter, and mix with the food the yolk of an egg, hard boiled and chopped small. But in my hands this cruel method has very rarely been attended with success.

6. OBSTRUCTION OF THE RUMP-GLAND, OR PIMPLES. In every bird there is a gland situated just above the tail, which secretes the oily substance necessary for pluming the feathers, and preserving them from the effects of rain. And as in captivity birds rarely get wet, they sometimes neglect to use this gland, and it consequently swells, dries up, or even ulcerates. A good remedy for this disease—of which the existence may be suspected if the bird be observed sitting still, with the tail bent downwards, and frequently pecking at the rough feathers on the affected part—is either to apply an ointment made of unsalted butter and sugar, or to enlarge the opening of the gland with a needle or small knife. A better ointment still, and which may be procured of any chemist, is compounded of litharge, white lead, wine, and olive oil. The usual process of cutting off the swollen gland, or perforating it with a needle, is indeed effectual in removing the disease ; but it destroys the gland also, and in the next moulting season the bird so treated generally dies, for want of the oily matter necessary to soften the feathers.

7. EPILEPSY. This disease, which is very common among Cage-Birds, seems to be brought on by a plethoric habit of body, resulting from abundance of good food, and want of exercise. I know of no better remedy than to dip the bird affected once or twice in the coldest water that can be procured, and then to cut the claws so closely as to let blood. A few drops of olive oil given to the bird, frequently produce a good effect. In the case of large birds, the best plan is to open a vein in the side of the feet. It may, however, be remarked, that this disorder sooner or later proves fatal to all birds affected by it.

8. MOULTING may be considered as a disease. At its annual recurrence great care and attention should be given to all the

inhabitants of the aviary, and a variety of wholesome food be provided for them.

9. SORE FEET form one of the maladies to which Cage-Birds are particularly subject, and which can be prevented only by a strict attention to cleanliness. The thick scales in front of the legs become loose every year, and ought to be removed ; great care being taken not to break the skin.

10. TYMPANY. In this disease the skin of a part, or the whole of the body, is puffed up by an accumulation of air beneath, till it is stretched as tight as a drum. The remedy which would naturally suggest itself is also the best ; namely, to prick the skin with a pin, and let out the air. I have known Larks, which were dangerously ill of this complaint, begin to sing within a quarter of an hour after the operation was performed.

11. GIDDINESS is perhaps rather to be considered a trick or bad habit, than a disease. It sometimes happens that birds of the first class acquire the habit of looking up to such an extent, as frequently to turn round backwards on the perch. There is no better means of preventing this, than by simply covering the top of the cage with a cloth ; by which the looking upwards, which is the cause of the giddiness, is effectually checked.

12. PARASITIC INSECTS may be suspected to exist in Cage-Birds if they are restless at night, and frequently peck the various parts of the body. The irritation thus indicated, may often be traced to the presence of small yellow lice in the skin, or concealed between the feathers. The most effectual remedy is to syringe the birds with water, in which a little quicksilver has been allowed to stand, or to expose them repeatedly to a mild fumigation with tobacco smoke. Frequent bathing, a careful attention to cleanliness, and a daily supply of fresh dry sand, are the best preventives.

13. EXCESSIVE CORPULENCE. If it should be noticed that the birds become exceedingly fat, as with some species is frequently the case in autumn, the best plan is to mix a larger proportion of carrot in the paste, and to put dry ants' eggs in the drinking vessel.

14. THE PAIRING FEVER generally attacks Cage-Birds in the month of May, in which the desire to pair is at its height. The birds affected by it usually cease to sing, grow melancholy, allow their feathers to become and continue rough, waste away,

and die. Those which are confined in cages are most subject to it; the reason of which may readily be discovered in the uniformity and tediousness of their way of life, and the ungratified sensual desire. I have cured many birds of this disease by merely hanging their cages before the window; by which simple remedy they seemed at once enlivened, and forgot their inclination for freedom and a mate.

VII. AGE OF CAGE-BIRDS.

THE Age to which Cage-Birds attain, depends chiefly on the care which is taken of them. We read of Parrots which have lived 100 years, and there are well-authenticated cases of Nightingales, Goldfinches, and Chaffinches, which have been confined in cages for twenty-four years. The age of Cage and Tame Birds is the more worthy of notice, as it forms the only satisfactory data for conclusions respecting the Age of Birds in general; so that in this, as well as in many other respects, our feathered favourites are worthy of the naturalist's attention. It is remarkable that birds, although attaining their full growth in a much shorter period, yet on the average live much longer than the mammalia. The age of the latter is equal to six or seven times the period which they take to grow, while birds live from fifteen to thirty times the same period. One reason for this is said to be the different density of the bones, which in birds is comparatively very small, so that the open structure remains porous and light during a much longer period.

VIII. BIRD CATCHING.

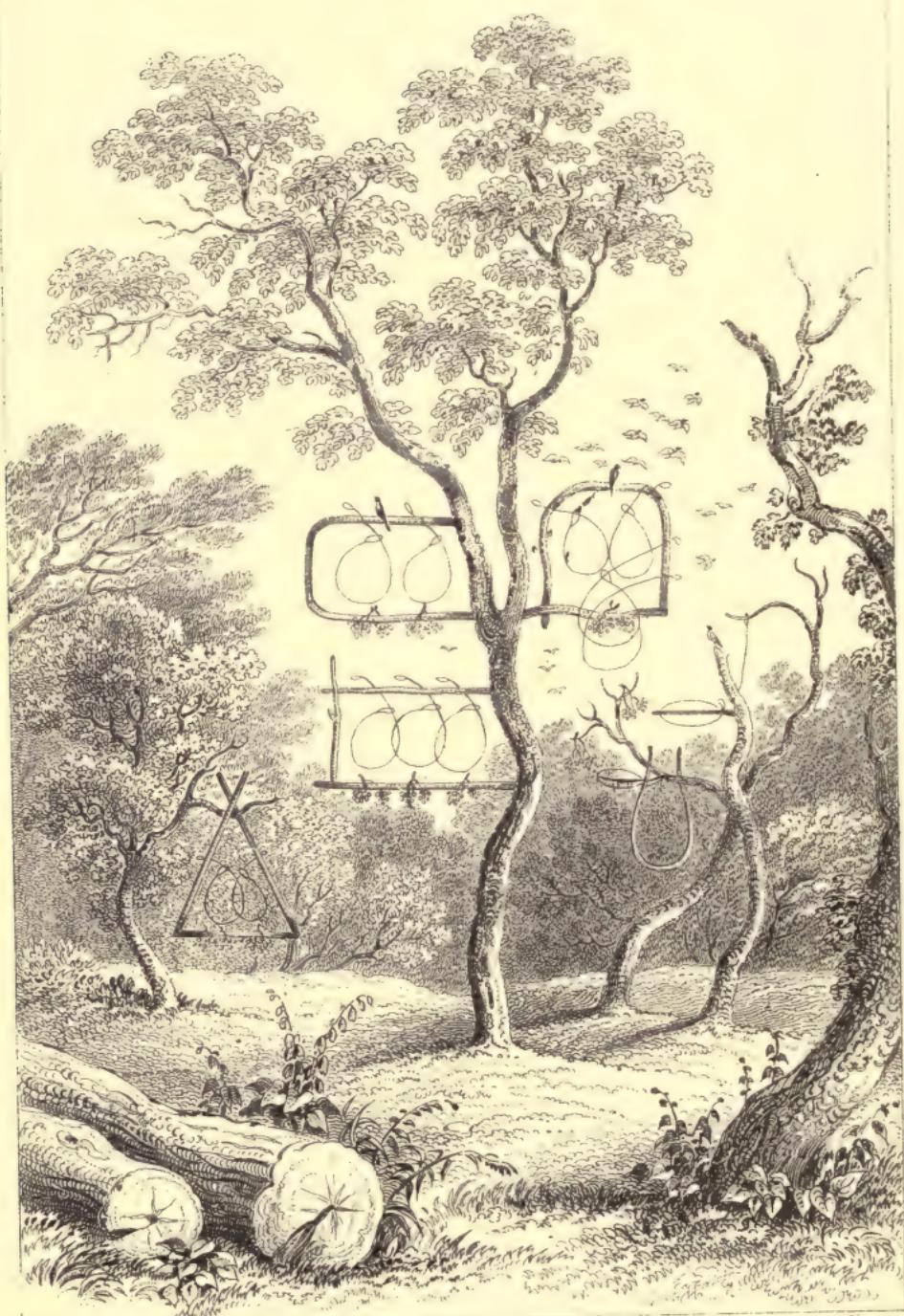
WE generally obtain the inmates of our aviaries from bird-sellers and fowlers; the former supplying us with foreign, the latter with indigenous birds. For the success of the latter, it is essential that they should be acquainted, not only with the various methods of catching birds, but also with the several calls and cries, which, as is well known, differ according to the difference of species, and according also to the various desires and emotions which they are intended to express. As, however, there is a peculiar method best adapted to the circumstances of every case, I shall, in my account of each bird, give particular directions as to the best means of catching it. The following remarks will therefore be understood to be only generally applicable.

Above all things, it is necessary to know the period at which the different birds may be caught with least difficulty. Birds of passage, *i.e.* those which, for the sake of a warmer climate and a more abundant supply of food, annually migrate into other countries, may be taken in spring or autumn. Such birds as wander from place to place, not on account of climate, but to procure their food, may be captured either in spring or autumn, and occasionally in winter; while those birds which always inhabit the same place, may be caught at any season of the year; though, perhaps, with the greatest ease in winter, when they are generally assembled in flocks of various sizes.

In autumn, birds may be taken in great numbers in the net; some being lured to it by the call of the decoy birds, and the attraction of the bait; others, like Larks, being driven into the nets spread for the purpose. Spring, however—when the birds are influenced by the sexual desire, and are attracted to the call of the decoy bird, or the fowler, by the hope of finding a mate—is the best season for the bird-catcher's operations. This too is the time to intercept those birds which pass the summer in some more northern, and the winter in some more southern regions than our own. The difference between the sexes is now also more readily discerned, as it is a well-known fact, that among migratory birds, the males always arrive at least a week before the females. March and April are the two months in the year best fitted for the purpose; and from daybreak till 9 A.M. is the best time of the day, as after that hour the birds are chiefly occupied in searching for food.

As it is a method by which almost all birds of the first and second classes may be caught, I shall here describe in detail the simple bird-trap used in Thuringia:—

Some strong oak or beech boughs are taken, to which the faded leaves are still attached, and the ends cut off, so as to produce a flat top of from 1 to $1\frac{1}{2}$ feet in width. Notches are then made in the cut branches, in which limed twigs are inserted. These decoy-bushes, as they are called, are then set up in plains near which it has been observed that birds of passage frequently fly. These places are not difficult of selection, as it has been found by experience, that such birds generally take the same route, from which they rarely deviate by more than 400 or 500 yards. In mountainous countries, this route generally crosses the vallies; and the overhanging eminences by



SPRINGES
(for Bird Catching)

Illustr. sc.

which these are bounded, are therefore excellent situations for the decoy-bushes. Underneath the bushes are placed the cages of the various decoy-birds, covered with boughs, in order that the call birds and those on the wing may by no chance catch sight of each other. Those birds which have themselves been caught when full grown are preferred as decoys, as those reared in the aviary are neither so able nor so willing to utter the call peculiar to their species, and, indeed, have in many cases learned the cry of other birds.

One of the best methods of catching birds is by the water-trap, in which are taken birds of every species, so that the fowler might make a selection. Nor is there anything more pleasant than to sit in a cool place, by the side of a brook, watching this trap on a hot summer's day. All that is necessary is to turn the water into a canal, from four to six feet long, and three to four feet broad, over which is stretched a net of the same size, on hoops, which prevent it from falling into the water. Level with the water are sticks of about an inch thick, and over the rest of the canal are spread branches. If the place be well chosen, it will be surrounded by birds throughout the day; though the best times are early in the morning, and again about sunset. It depends upon the position of the trap, whether it will succeed in taking such birds as frequent fields and gardens, as well as the inhabitants of the woods.

Another method, which is both easy and practicable, is to clear in woods and thickets a straight or crooked path, in which are to be set nooses of horse-hair or fine linen-thread. By this means, especially at the end of September and the beginning of October, may be caught large numbers of such birds as eat berries, *e. g.* Thrushes, Redbreasts, &c. This trap is called in Germany "Schneuss."*

Cages which, when empty, may be folded up and carried in the pocket, add very much to the bird-catcher's convenience. They are, however, adapted only for such birds as Goldfinches, Siskins, Linnets, &c., which are quiet almost as soon as caught; while others, like Chaffinches, Larks, &c., are so violent as to render it advisable to put them in a small bag, if possible lined with felt, in which they can by no chance injure themselves. It is

* We should speak of it as a GIN; the *nooses* or *springs* employed are not only of various materials, but also of different shapes, as will be seen by the accompanying plate.

also recommended that such birds should be kept at first in a dark room, and have their cages frequently covered with green boughs or a cloth, to prevent their beating themselves against the wires, or injuring their plumage. In these respects, however, every bird requires a distinct treatment, the particulars of which are best taught by experience.

SWEET'S ACCOUNT OF THE GENUS SYLVIA.

THE British species belonging to this interesting genus are chiefly birds of passage, visiting this country in spring, and leaving it again in autumn; several of these are deservedly esteemed as the finest songsters of all the feathered race; the Nightingale, in particular, has the sweetest and most pleasing note of any bird at present known. It has been generally supposed that they are very difficult to preserve in confinement; but I have succeeded well in keeping several of the most interesting species through several winters in perfect health, and many of them are in full song all the winter; and I have not the least doubt but all the species might be kept without difficulty in the way I have practised.

They will succeed very well in a warm room in winter, or, if convenient, any part of a hot-house would suit them admirably; but they require a little fresh air when the weather is mild. They might be preserved in cages, either separately or several together, or in a small aviary, where all the species might be intermixed. In the latter manner mine are kept at present. The temperature of the room where they are, ought never to be much below temperate, though some of the kinds do not mind a slight frost. The species that I have found suffer most from cold, are, *S. Rubetra* (Whin-chat), *S. Phænicurus* (Redstart), and *S. Hortensis* (Greater Pettichaps); the Nightingale (*S. Luscinia*) is not near so tender as these; *S. Cinerea* (Larger Whitethroat), *S. Sylviella* (Lesser Whitethroat), and *S. Atricapilla* (Blackcap), scarcely seem to mind the cold at all.

In a wild state, the species of this genus feed almost entirely on insects and fruit, but in confinement they may be taught to feed on several other things; but the more insects they have given them the better; and I believe it is impossible to keep them in perfect health without a frequent supply. The food that I find agrees with them best for a constancy, is an equal proportion of bruised hemp-seed and bread, mixed up in the following manner: I first put some hemp-seed in a little pan, and pour some boiling water on it; then, with a stick flattened at the end, I bruise it as fine as possible, and add the same quantity of soft

bread, which must also be bruised up with it, so that the oily milk from the seeds may be mixed with the bread, till it is of the consistence of a moist paste: of this mixture they are all very fond; but it should be mixed up fresh every day, particularly in summer, or the stale food will injure their health, and make them dislike it altogether. I also give them a little boiled milk and bread for a change, and some fresh raw meat cut in small pieces; some of the species like the fat best, but the greater part prefer the lean. In winter, when insects are scarce, I occasionally treat them to the yolk of an egg, boiled hard, and then crumbled small; this partly answers the purpose; but it is a good plan to have a stock of insects in store, to supply them with a few every day, which keeps them in good health, and makes them sing more melodiously.

A supply of some sorts of insects is easily preserved for the winter. The large species of Flies may be caught in great abundance in autumn; particularly the *Musca tenax*, which, at that season, are very plentiful on the *Dahlias*, *French* and *African Marygolds*, and other plants belonging to the *Compositae*. *Musca vomitoria* is also plentiful on the *Ivy*, when it is in flower; of these two species large quantities may be caught, and dried for the winter; they only require to be put loosely in a paper bag, and to be hung up in a dry room, so that they do not get mouldy; when they are given to the birds, a little boiling water must be poured on them, which softens them; and the birds are as fond of them as if they were alive. The common maggots from decayed meat might also be saved for them, in large quantities; by collecting them late in autumn, and putting them in a large pot, or pan, in dry mould, and then keeping it in a cool, dry place, will preserve them all the winter; when a few may be given to the birds as often as the stock will allow of it. If kept in too warm a place, they will turn quickly into the pupa state, and the flies will soon come out of them, and by that means, the stock will soon diminish; though the birds like them as well, or better, in the pupa state.

Some fine gravel must also be kept continually in their cages; as the birds of this genus eat a great deal of it, and will not continue in good health without a constant supply. They are also very fond of washing often; so that a pan of water, or something large enough for them to get into, should be kept constantly at the bottom of their cage.

These birds, when in confinement, are very restless at the seasons of their usual migration from one country to another; at the time that they are leaving this country in autumn, about twice during the winter, and again when they are returning in

spring. From their agitation at various times in winter, it may be concluded, that they visit more than one country, after their departure from this. It is very curious to see them when in that state; their restlessness seems to come on them all at once, and generally in the evening; when they are sitting, seemingly, quite composed, they start up suddenly, and flutter their wings; sometimes flying direct to the top of the cage, or aviary; at other times, running backwards and forwards on their perches, continually flapping their wings, and looking upwards all the time; nor will they notice any thing that is going forward, as long as they continue in that state, which lasts for an hour or two at each time. By their always wishing to fly upwards, it may be supposed that, when they first take their flight, they mount direct upwards to a great height, so that they can direct their course the better, by seeing the way clear all around them: their agitation generally lasts on them about a fortnight, sometimes more and sometimes less; in the spring it seems strongest on them; at that season, they will sometimes flutter about the whole of the night, and sleep a great part of the day.

The best method of catching the birds of this genus is with the common Nightingale trap, baited with living insects. When they are first caught, they must be fed with insects, or fruit, according to their species; but they will soon learn to eat the other food, by sticking insects or fruit in it, so that they once taste it; if they are put in with tame birds, they will sooner get reconciled to their confinement; or if two or three wild ones are put together, they will do much better than a single one. When first caught, the cage in which they are kept should be darkened, all but a little light near their food, or they will be apt to beat themselves very much, and not be so likely to do well; it is, certainly, a good plan to keep several together, particularly in the winter, as they will sit close together on their perch at night, and by that means keep each other warm.

Young birds of any of this genus may be bred up by hand, if the nests are taken as soon as the birds are fledged; they may be fed on the same kind of food recommended for the old ones, feeding them as often as they chirp for food, and giving them as much as they will take readily each time, not forgetting to let a drop or two of clean water fall into their mouth frequently; the neglect of this, I believe to be the only reason that so few people can rear young birds. Those bred in this way are very tame and familiar; but I do not think them so hardy as those that are caught wild.

I believe it has not been mentioned by any previous author, that the birds of this genus moult, or change their feathers, more

or less, twice in the year ; in the summer or autumn before they take their departure from this country, and again in the latter end of winter, or before their arrival in spring ; this appears to be a provision of nature, that their feathers may be fresh and strong, to assist them in their flight from one country to another. I seldom find that they suffer any inconvenience from moulting, as birds in general are supposed to do ; the only thing to guard against, is to be careful that they do not get chilled with cold, but to keep them rather warmer at that time than they generally are ; I find nothing of more real benefit to them, than to place them out in the sun as often as possible, which brings out their feathers very quickly.

These birds are sometimes troubled with warts, or swellings on their feet, particularly in cold weather, which makes them lame, and sometimes it irritates them so much, probably from its itching, that I have known them pull off their claws ; but this is easily remedied, for when they are observed to be lame, if a little fresh butter be rubbed on their feet, or, what is a great deal better, a small quantity of cold cream, it will cure them almost immediately. I have cured them in a very short time, even when their feet have been swelled very much, and full of knots, or warts. If by accident they happen to break off a claw or toe, it is best to soak it directly in Freeman's Bathing Spirits, which stops the blood immediately, and soon heals the wound.

I also find that their general food, which is bruised hemp-seed and bread, is apt to become dry on a summer's day, particularly if the cages are placed out of doors ; it must then be moistened, or the birds will not eat of it, as they always prefer it very moist ; it had better be a little over-moist than too dry. I also find that they are fondest of their meat, when mixed up with the bruised hemp-seed and bread, which should be cut up in small pieces, not scraped with a knife, as is generally done ; a little very fresh might be given occasionally, which they will sometimes prefer as a change ; the change of food I consider of the greatest importance, both as to keeping them in good health, and raising their spirits to make them sing ; nearly the whole of mine have been in full song all the winter ; the greater part began to sing in October, and the others in November.

Bird-fanciers generally keep their Nightingales, or other birds that they consider tender, in a close cage, with wires only in front, thinking it will keep them warm, and preserve their health ; on the same principle I had my largest cage made, only with green baize at the top, to keep them from injuring their heads when on their passage ; at the same time I had a less cage, wired all round except on one side, and I was surprised to find that the

birds were always more healthy in that, than in the close one, where some of them were frequently ill ; and I generally found that when removed into the open cage, they soon recovered : I therefore had the close one altered with wires at both ends and front, and a close back, that there might be a free circulation of air, which I supposed the birds wanted ; and since that time they have all been in excellent health. I had observed before, that the Nightingales always sing better in an open cage than in a close one.

I before mentioned, that a pan of water should be kept continually in their cage, that they might wash whenever they chose ; this is the case with the greater part of them when old birds, but it is very hurtful to young ones, as it is apt to give them the cramp, and weaken them. I also find that the Wood-wren, Grass-hopper-warbler, Sedge-warbler, and Reed-warbler, will wash so much in winter, if the water is left continually in their cage, that it will weaken them very much, and frequently cause their death. It is, therefore, best to give them water in something that they can wash in, allowing them to wash about once a week in the winter, and that always in the morning of a fine dry day ; they will then be able to clean and dry themselves in good time.

ADDITIONAL.—The Hon. and Rev. WILLIAM HERBERT says of the *Sylviadæ*, “ Milk, which Mr. Sweet recommends, I have found very fatal to many of the soft-billed birds, and I never give it, but the Black-caps do not seem to suffer from it. They are very fond of a boiled carrot, mashed and incistened, or beet-root boiled and mashed. A boiled carrot will keep fresh many days in a basin of cold water, and is an excellent substitute for fruit in feeding them. Boiled cabbage, cauliflower, green peas, are good for them ; all sorts of puddings ; a very little roast meat, minced, I give them every day, and a little yolk of egg when it suits, but it is not necessary. The standard food is hemp-seed ground in a coffee-mill, and bread crumbs scalded and mashed up together, and fresh every day. They are very fond of ripe pears and elder-berries, but the latter stain the cage very much ; currants, cherries, honeysuckle, and privet-berries they also like.”

Professor RENNIE says—“ I have more than once given the Black-cap and other birds a little milk by way of medicine, when they appeared drooping or sickly, with manifest advantage.”

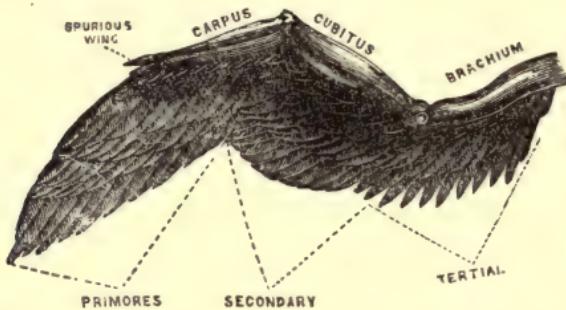
It has been observed, that too much hemp-seed is prejudicial to all birds in a state of confinement, frequently inducing blindness, loss of voice, and pulmonary disease.

STRUCTURE OF BIRDS.

BIRDS are described by CUVIER as "Oviparous, vertebrated animals, with double circulation and respiration, organized for flight. Their lungs are not divided, but fixed to the ribs, and are enveloped in a membrane pierced by great holes, which permit the air to pass into many cavities in the chest, lower belly, arm-pits, and even the interior of the bones; so that the exterior fluid not only bathes the surface of the pulmonary vessels, but also the surfaces of an infinity of vessels of the rest of the body. Thus, birds respire in some respects by branches of their *aorta* as well as by those of the pulmonary artery, and the energy of their irritability is in proportion to their quantity of respiration. All their body is arranged to participate in this energy. Their anterior extremities destined to sustain them in flight, could neither serve the purpose of standing or holding; hence they are biped, and take things from the ground with their mouth; thus their body is inclined before their legs, the thighs carry them forward, and the toes are elongated to form a sufficient base; the *pelvis* much extended in length, to furnish attachment to the muscles which support the trunk on the thighs. There is moreover a set of muscles proceeding from the pelvis to the toes, and passing over the knee and heel, so that the weight alone of the bird closes the toes, and thus they are enabled to sleep perched on one foot. The *ischia*, and especially the *ossa-pubis*, are elongated behind, and widen to leave sufficient place for the development of the egg.

"The neck and the beak are elongated, to reach the ground, and the former has pliability enough to be bent backward when at rest. It has therefore many vertebræ. On the other hand, the trunk, which supports the wings, has very little motion; the *sternum* especially, to which are attached the muscles which lower the wings in flight, is very much extended, and has its surface increased, moreover, by a luminous projection in the middle. It is formed of five pieces; one central, of which the luminous projection makes a pivot; two anterior lateral, for the attachment of the ribs; and two posterior lateral, for the extension of its surface. The degrees of ossification of these last in each species denotes the proportion of vigour for flight. The *furca* produced by the union of the two *clavicles*, and the two vigorous supports formed by the *coracoid apophyses*, widens the shoulders; the wing—sustained by the *humerus*, by the fore-arm, and by the hand which is long, and has one digit, and the vestiges of two others—carries along its whole length a range of elastic quills, which greatly extends the surface which resists the air. The quills adhering to the hand are called *primary*, and

there are always ten ; those belonging to the fore-arm are called *secondary*, and their number varies ; the feathers, less strong, attached to the *humerus*, are called *scapular* ; the bone which represents the thumb has also certain quills called *bastards*.



The bony tail is very short, but it has also a range of strong feathers, which by spreading, continue to support the bird ; their number is commonly twelve, but there are sometimes fourteen ; in the gallinaceous birds there are eighteen.

The feet have a *femur*, a *tibia*, and a *peroneum*, articulated to the *femur* by a spring, whose extension is maintained without effort on the part of the muscles. The *tarsus* and *metatarsus* are represented by a single bone, terminated at the bottom by three pulleys.

Clutching Feet.

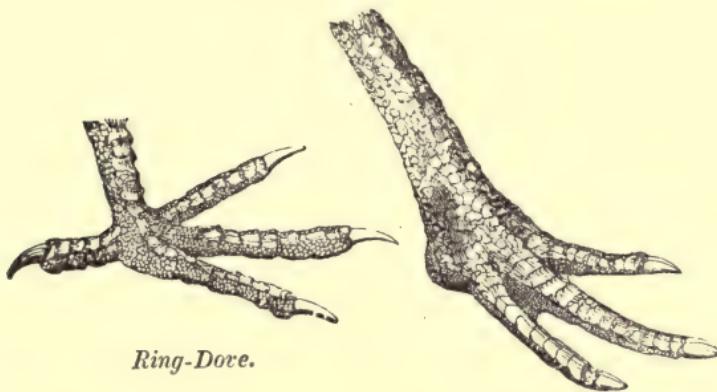


Golden Eagle.

Osprey.

There are generally three toes in front, and a thumb behind; the latter is sometimes wanting; and in the Martins is directed forward. In the climbers, on the contrary, the external toe and the thumb are directed backwards. The number of articulations increases in each toe, commencing with the thumb, which has two, and finishing with the extreme toe, which has five.

Walking and Running Feet.



Ring-Dove.

Little Bustard.

Birds are in general covered with feathers, a sort of tegument best adapted to protect them from the effects of the rapid variations of temperature to which their movements expose them. The air cavities which occupy the interior of their body, and which even occupy the place of marrow in the bones, augment their specific lightness. The sternal portion of the ribs, like the vertebral, is ossified, to give more force to the dilation of the chest

The eyes of birds are so disposed, as to enable them to distinguish objects both far and near equally well; and a vascular and folding membrane placed at the bottom of the globes, at the edge of the crystalline, assists probably in displacing that lens. The anterior surface of that globe is moreover strengthened by a circle of bony pieces; and besides the two ordinary eyelids, there is always a third placed at the internal angles, and which by means of a remarkable muscular apparatus, is able to cover the front of the eye like a curtain. The *cornea* is very curved, but the *crystalline* is flat, and the *vitreous humour* small.

The ear of birds has but one little bone between the *tympanum* and the oval aperture. Their *cochlea* is a cone scarcely bent; but their semi-circular canals are large, and lodged in a part of the skull, where they are surrounded on all sides with air cavities which communicate with the area. Night-birds alone have a large external ear, which, nevertheless, is not so prominent as

that of quadrupeds; this opening is generally covered with barbed feathers, more fringed than the others.

The organ of smell, hidden in the base of the beak, has commonly only three cartilaginous *cornets*, which vary as to their complication; it is very sensible, although it has no *sinus* dug into the skull. The size of the osseous openings of the nostrils governs the form of the beak; and the cartilages, membranes, feathers, and other teguments, which straighten these openings, have an influence on the strength of the smell, and on the sort of nourishment.

The tongue has little muscular substance, and is sustained by a production of the *hyoid* bone: it has but little delicacy in the majority of birds.

The feathers, as well as quills, which differ from them only in size, are composed of a stem, hollow at the base, and of barbs, each having others much smaller; their tissue, their brightness, their strength, and general form, vary infinitely. Touch must be weak in all parts capable of it; and as the beak is almost always corneous, and possessed of little sensibility; and the toes are covered with scales on the upper side, and with a callous skin underneath; this sense must be but little efficacious in birds.

The feathers fall sometimes twice a year. In some species, the winter plumage differs from that of the summer. In general, the female differs from the male, by colours less bright, and the young of both sexes resemble the female; when the adult male and female are of the same colour, the young have a dress peculiar to themselves.

The brain of birds has the same character as that of other vertebrated oviporous animals; but is distinguished by a size in proportion very considerable, often exceeding that of the same organ in the mammalia. It is principally to tubercles, analogous to the *corpora striata*, that the volume is referable, and not to the hemispheres, which are very narrow, and without circumvolutions. The *cerebellum* is large, almost destitute of lateral lobes; and almost entirely formed by the *vermiform* process.

The *trachea* of birds has its annulations entire; at its bifurcation is a *glottis*, generally furnished with peculiar muscles, and named the lower *larynx*: it is there that is formed the voice of birds; the enormous volume of air contained in the air-vessels contributes to the force of their voice, and the trachea, by its various form and movements, to the modification of the voice. The upper larynx, very simple, has but little to do with this.

The face, or upper beak of birds, formed principally by the *intermaxillaries*, is prolonged backwards into two arcades, the internal of which is composed of the *palatine* bones, and the external of the *maxillaries* and *jugals*, and which are supported on

a moveable *tympanic* bone; and on the upper part, this same face is articulated, or united to the skull by elastic laminæ; this mode of union leaves them, at all times, some degree of mobility.

The horn which invests the two mandibles serves the place of teeth, and is sometimes prickled, so as to represent them. Its form, as well as that of the mandibles which sustain it, varies infinitely, according to the nature of the food which each species takes.

The digestion of birds is proportioned to the activity of their life, and the force of their respiration. The stomach is composed of three parts; the crop, which is a folding of the *œsophagus*; the *succentorial ventricle*, a membranous stomach, furnished in the thickness of its surface with a multitude of glands, the secretion of which imbibes the food; and finally, the *gizzard*, armed with two powerful muscles, which two radiated tendons unite, and lined within with a cartilaginous coating. The food is ground there the more easily, by the bird swallowing little stones to augment the force of the tituration. In a majority of species which live only on flesh, or on fish, the muscles and the surface of the gizzard are reduced to an extreme weakness; it has the appearance of making only a single bag with the *succentorial ventricle*. The dilation of the crop is also sometimes altogether wanting.

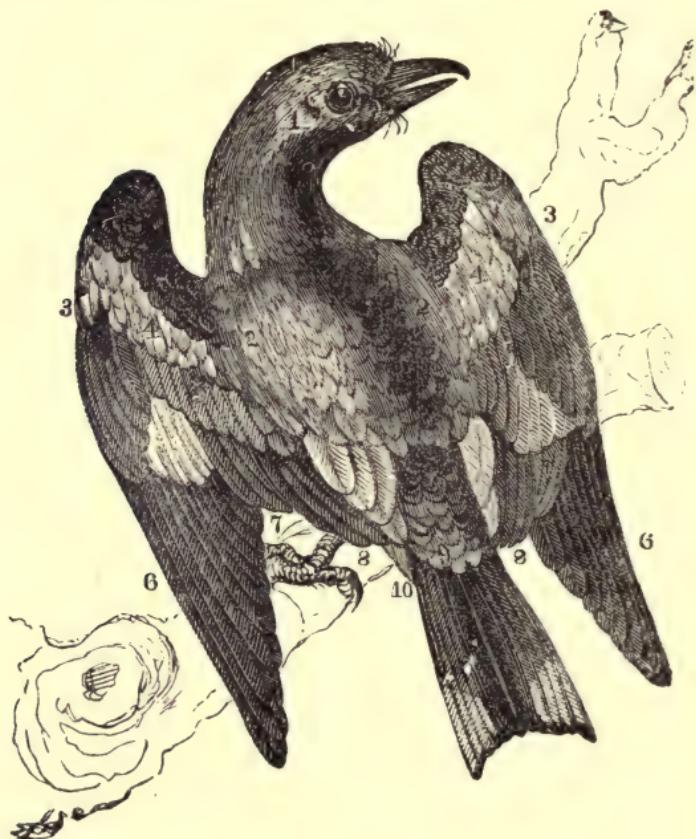
The liver turns the bile into the intestines by two conduits, which alternate with the two or three by which the pancreatic fluid passes. The *pancreas* of birds is large, but their *spleen* is small; they have no *epiploon*, the uses of which are in part supplied by the partitions of the air-cavities. Two appendages are placed toward the origin of the *rectum*, and a short distance from the *anus*; these are more or less long, according to the food of the species. The herons have them very short; other genera, as the *pici*, are without them altogether.

Every one knows the varied industry employed by birds in constructing their nests, and the tender care they take of their eggs and of their young; this is the principal part of their instinct. For the rest of their intellectual qualities, their rapid passage through the different regions of the air, and the lively and continued action of this element upon them, enable them to anticipate the variations of the atmosphere in a manner of which we can have no idea, and from which has been attributed to them, from all antiquity, by superstition, the power of announcing future events. They are not without memory or imagination, for they dream; and every one knows with what facility they may be tamed, and may be made to perform different operations, and repeat certain airs and words.*

* See Griffith's Cuvier, vol. vi. p. 3.

PLUMAGE OF BIRDS.

As in the popular study of birds, reference is most frequently made to the plumage, as distinctive of the several species, we have thought it well to explain somewhat fully its nature and construction: and this we cannot do more lucidly and concisely than in the words of MUDIE,* who illustrates his subject with the following cut of the Garrulous Roller (*Coriacius garrula*); because, although rare as a British bird, it is one in which the different feathers are very distinctly marked, and the parts well defined. The upper surface is here only represented; but as the back is the most interesting part, and the one most usually noticed, this will be sufficient for our present purpose.



* Mudie's British Birds, vol. i.

1. Is the *ear covert*, which consists of certain soft feathers, which cover the external organ of hearing. They vary considerably in birds of different species, and on that account they are of considerable use as means of distinction.

2. The *scapulars*, or feathers, which cover the shoulders and shoulder-bones, and the places where the *humeri*, or first bones of the wing, answering to the bones of the human arm above the elbow, are articulated. They unite, without much distinction, with the common feathers of the back, and along with those of the wings and the sides. The scapular feathers serve only as clothing to the parts which they cover, but they form a thick, and comparatively a downy covering, which, while it admits of easy motion, preserves the important joints which it covers from the varieties of the weather.

3. The *bastard wing*.—This consists of a greater or smaller number of feathers, bearing some resemblance to the quills of the true wing. They grow from a little bone, which is united to the third or wrist joint of the wing; and they, and the bones by which they are supported, are generally strong in proportion to the power of flight in the bird. Indeed, there is generally a development of all that part of the wing which corresponds to the hand, proportional to the power of flying. Thus, in the wing of the Jer Falcon, which may be considered as the bird of finest and most graceful flight, the thumb consists of two distinct bones, and even a marking, as if the last two were united; and the four fingers may be traced, the first in a long bone, the second in a small one, and the third and fourth in two ribs, united by a very thin plate of bone. The use of the bastard wing is not very well known, because the action of the different parts of the wing, during flight, is not easily observed; but it is probable that it prevents the wing from turning upwards, and even gives the point of it a downward motion, in the contrary direction to that in which the wing is moved, and thus propels it forward.

4. The *lesser wing-coverts*.—These are the first parts of the plumage of the wings, which in all birds take the form of definite and firm feathers. There are generally several rows of them; and there are *under-coverts*, which answer to them, and line the under or inner side of the wings, but these are more slender and downy in their consistence, and, generally speaking, they have less colour.

5. The *greater wing-coverts*.—These lie under the lesser ones, and are still larger and stronger, stretching a considerable way over the quills or flying feathers, and being supports to these for a greater part of their length than the lesser coverts. They are also much stronger, in proportion to the coverts which answer to them on the under-sides of the wings.

6. The *primaries*, or principal quills. These form the termination of the wings, and are the strongest feathers on the bird. They rise from the hand, or that portion of the wings which is below the wrist joint, and which, though it sometimes contains three distinct bones in its length, is frequently called the first (or third) bone of the wing. These feathers are numbered in order; the outer one, or that which is foremost in the expanded, or lowest in the closed wing, is the first. Considerable differences in the form of wings arise from the various lengths of the feathers; and these are accompanied by corresponding variations in the style of flight. If the first or second of these feathers be the longest in the wing, (and when the second is longest the first comes underneath and supports it,) the bird can turn in the air with greater ease than with any other form of wing. Birds which hawk flying, or catch their prey while on the wing, whether they catch other birds, as the Falcons, or insects as the Swallows, have their wings of this construction. The Pigeons, which are also birds of excellent wing, have the second feather longest; but the Lapwing, which is remarkable for the variety of its motions in the air, has the longest feathers far into the wings.

7. The *secondaries*, or second quills of the wing. They arise from that part of the wing which is commonly called the second bone, and which answers to the fore-arm in man. They come from it towards the wrist joint, and admit of a folding of the wing between them and the primaries, when the wing is closed. When the wing is open they sometimes appear a continuation of the same curve with the primaries, and at other times they form a distinct curve of their own.

8. The *tertiaries*, or third quills of the wing. They arise chiefly from the same bones as the secondaries, but nearer to the elbow joint. In some birds, especially those which are in the habit of running very swiftly with the wings partially opened, the terciaries are often so long, and come so to a point, that the bird appears as if it had four wings, or rather had a double wing on each side. This form of wing answers some important purposes in their economy.

From the manner in which the several coverts support each other and the quills, the wing is a finer combination of lightness, strength, elasticity, and stiffness, than could be produced by any other means. These coverts support, and admit of motion upon each other, not unlike that which takes place in a coach-spring, which is about the best of our mechanical contrivances for rendering motion smooth and free from jolts, at the same time that the compound spring is much less liable to be broken than if it were formed of a single piece of metal.

9. The *rump-feathers* and *upper tail-coverts*. The first of

these are a continuation of the covering of the back ; and the second support the tail feathers on the upper side, and are strong in proportion, as these are adapted for action in flying. In birds which use the tail as the means of support in fixing themselves upon upright surfaces, as is the case in the Woodpeckers, the upper tail coverts are very strong and close, and so thick is their array, as to give that organ the same stiffness as a powerful wing. In those birds, also, which have to take wing from the water, and yet have not the feet webbed and placed far backwards, so as to support them when rising, the tail-coverts are peculiarly strong, in order to support the tail feathers, which are the principal *fulcra* from which the bird gets into the air.

10. The *vent feathers* and *under tail-coverts*, which cover the hinder part of the bird ; and in those birds in which the tail feathers are long and stiff, and much used in the act of flying, support the under side of these feathers, in the same manner as the under-coverts support the quills of the wings. In those birds which have a habit of flirting up the tail, the under-coverts are longer and stronger than in those which have no such habit.

The *tail feathers* require no reference. They vary much in their numbers and length, and also in the form of their terminations, and the motions which the bird can communicate to them. In some birds the whole, or, at least, great part, of these feathers appear to be merely ornamental, which of course means nothing more than that their uses have not been observed. In general, however, they act both as a rudder in flying, and as a means of directing the motion upwards or downwards. Analogy would indeed lead us to suppose that their chief use is in the upward and downward motion, because their greatest surface is generally horizontal. The analogy is further confirmed by the fact, that many of the low-flying birds have the breadth of the closed tail in the vertical plane, though these also can, in general, spread it out like a fan when they fly.

The other feathers are to be considered rather as the clothing of the bird than as active instruments in its flight, or as auxiliaries in its motions upon the land or the water. But still they are not less worthy of notice, both in the distinguishing of one bird from another, and in tracing how well all the parts of birds are adapted to their general habits and their haunts. These ordinary feathers are imbricated—that is, they are placed one over the edges of two—as slates or tiles are in a covering of a roof. By means of this arrangement, all the parts of the bird are equally feathered, and so they are equally proof to the action of the atmosphere. The lines in which the several rows of feathers are placed, form very curious curves, and their shafts diverge or

converge so naturally, and with so perfect agreement, to the surface which they cover, that no line of separation can be traced.

The feathers of birds, the coverings of the featherless parts, and even the beaks and claws, are all, chemically speaking, formed of nearly the same materials ; and nearly the same with the hair and cuticle of all animals, and even with the epidermis which covers living shells. This material is coagulated albumen, or nearly the same substance as white of egg when consolidated by heat, in which state it better resists the action of water than almost any other flexible substance. This substance is, especially in the upper or more coloured and glossy part of the feathers, combined with oils and metallic substances in very minute portions ; but in the down and the light-coloured feathers it is nearly pure.

The under part of the clothing feathers, and also a small portion of almost all feathers near the tube or barrel, consists of down, but the exposed surfaces, even of the softest feathers, are smoothed so as to throw off the water. This is the case even in those water-birds which pass the greater part of their time with the under part of the body immersed in water. On them, the down is abundant in proportion as the habits of the birds expose them to cold ; and the external surface is waterproof, from its glossy texture, and (possibly ?) also from the oil with which the bird anoints it by means of its bill : but in all birds there is an external surface, adapted to prevent decomposition, and an inner downy matter, as a protection against changes of temperature. The down is partly on the root-ends of the feathers, and partly on the skin in the intervals between them, but the material is in all cases substantially the same ; the difference is in the form, or in the colour, which generally approaches nearer to white in the down than in the feathers. When the bird remains all the year round in situations where there are great differences in the heat of the seasons, the down increases in quantity during winter ; and when birds of a warmer climate are domesticated in a colder one, they become more downy. The form which the down assumes is often characteristic of the habits of the bird. In the Ostrich there is none ; in some birds it is a mere tuft at the origin of the webs, in others it is a second feather originating there ; and there are all the intermediate states in different birds, and very considerable seasonal differences in the same bird.

Different birds find their food in different states, both of the atmosphere and the waters ; and very beautiful corresponding differences in their plumage may be traced. The plumage upon the Raven, which braves the storm in the wilds, is very different from that of the gallinaceous or poultry races, which a slight shower drives to their cover or their perch ; and Ducks and other

water birds, which seek their food peaceably on the banks, or by swimming in the shallow waters, have very different plumage from those which hawk about on the wing, in order to catch what the troubled sea brings to the surface. If the habit of the bird be to steal softly on its prey, then the feathers are fined off to exceedingly delicate points, so that it can glide silently through the air.

The feathers of birds, while they remain perfect and firm in their connection, are really parts of a living animal, and as such they must be regarded as organs of feeling. They do not, probably, in themselves feel pain, but they are in intimate connection with parts which do. The epidermis in no animal appears to feel pain, even in those parts of the animal which are regarded as being more immediately the organs of sensation; but they very speedily transmit impressions to the parts that do feel. It is the same with hair, and with all the appendages of the cuticle, such as nails, claws, hoofs, and horns. The horse feels his footsteps in the dark, even when his hoofs are shod with iron; and he feels not only the touch of a wall, a gate, or any other obstacle, but he feels the difference which such objects cause in the resistance of the air, and that enables him to avoid touching them.

The horse feels his way by means of the hair, and birds must in like manner often feel their way by their feathers. Such must be habitually the case with Owls and other nocturnal birds, which can fly darkling through thick woods and other intricate places; and though the Owls have their eyes directed forwards, and not laterally, as many other birds have, they are by that means less capacitated for avoiding by sight, even admitting that they can see with the smallest possible portion of light, those obstacles which it would be the most awkward to encounter—those of course which would injure, entangle, or impede their wings. If one wing were to come in contact with a tree, or even with a leaf, the bird would be upset, as certainly as a man is, when in walking heedlessly he places one foot over a pit or ditch while the other is on the ground.

The necessity of feeling with the feathers is not confined to nocturnal birds, but is essential to the safety of all the winged tribes, the feathers must therefore always be in a state of great perfection. Now though the shafts of many feathers and the larger ribs of the webs or bones of not a few, are of considerable substance and strength, all feathers are subdivided till the ultimate ramifications are exceedingly minute. Consequently, they produce very large surfaces to the air, in proportion to the quantities of matter they contain.

Feathers are thus very much exposed to atmospheric action, which dries them, and renders them unfit for the functions that

are required of them. They are also apt to be broken or torn in the flights, the wars, and the labours of their owners. They are therefore periodically shed and reproduced; and the reproduction usually takes place in such a way, so that the bird shall be in best feather, at the very time when it has the greatest labour to perform.

The resident native birds of countries where the heat of the year is comparatively uniform, moult gradually, and the same may be said of those that have their haunts in regions that are always cold, and where the food is comparatively limited. Such birds are seldom so denuded of feathers as to be unfit for pretty vigorous flight. Birds which migrate from region to region moult more periodically; and in places where the migration is extensive, it will perhaps be found, upon further examination, that the bird moults twice in a year, though in most instances the spring moult is less general than the autumnal one, being in many birds, the males especially, rather a change of colour than of all the feathers. Birds which migrate *polarly*, or for the purpose of breeding, generally receive their nuptial colours, if not their plumage, after they arrive; but when they migrate equatorially, they change their plumage before they begin their journey. The vernal change in the plumage of birds is owing to the same cause as the change of their voices, from the chirp or cry to song; and in a state of nature the two cease together.

HABITAT AND MIGRATION OF BIRDS.*

THE habitat of birds is not circumscribed within such narrow limits as that of quadrupeds, because, by means of their wings, they can traverse more space, and even cross the seas. The aquatic birds, by alternate flying and swimming, can proceed to the most remote countries. Nevertheless, each species adopts a country, chooses a climate suitable to its nature, and when the change of season obliges it to seek, under new skies, a country analogous to its former one, it is but for a season. These birds always return to their favourite country at the season of reproduction. The Stork, indeed, has two separate broods, one brought forth in Europe, and the other in Egypt.

Birds, generally speaking, appear to belong more to the air than to the earth. They constitute moving republics, which traverse the atmosphere at stated periods, in large bodies. These bodies perform their aerial evolutions like an army, crowd into close column, form into triangle, extend in line of battle, or disperse in light squadrons. The earth and its climates has less influence on them than on quadrupeds, because they almost

* Abridged from Griffith's Cuvier, vol. vi. p. 149.

always live in similar degrees of temperature, passing the winter in hot climates, and the summer in cold. The continual interchange of birds establishes a communication between all countries, and keeps up a sort of equilibrium of life. The bird passing in summer from the equinoctial climates to the cold regions of the north, and again in winter from the poles towards the equator, knows, by an admirable instinct, the winds and the weather which are favourable to his voyage. He can long foresee the approach of frost, or the return of spring, and learns the science of meteorology from the element in which he almost constantly lives. He needs no compass to direct his course through the empire of the clouds, the thunder, and the tempest; and while man and beast are creeping on the earth, he breathes the pure air of heaven, and soars upwards nearer to the spring of day. He arrives at the term of his voyage, and touches the hospitable land of his destination. He finds there his subsistence prepared by the hand of Providence, and a safe asylum in the grove, the forest, or the mountain, where he revisits the habitation he had tenanted before, the scene of his former delights, the cradle of his infancy. The Stork resumes his ancient tower, the Nightingale the solitary thicket, the Swallow his old window, and the Redbreast the mossy trunk of the same oak in which he formerly nestled. All the volatile species which disappear in the winter do not, therefore, change their climate. Some retire into remote places, to some desert cave, some savage rock, or ancient forest, from whence they sally at the close of winter, and spread themselves through the country.

Other families of birds do not, properly speaking, emigrate. They content themselves with approaching the southern climates, in proportion as they are pursued by the cold. The species called erratic, such as the Greenfinches of the Ardennes, Larks, Ortolans, other frugivorous races, and especially Parrots, go in troops begging, as it were, their subsistence on the passage. Others follow the track of cultivation, and spread themselves in proportion with the habitations of men.

Of the birds which emigrate every year, some depart in autumn and return in spring, while others depart in spring and return in autumn. Our insectivorous races, and many granivorous, finding nothing at the beginning of winter but a soil deprived of its productions, presenting every where the image of desolation and death, are necessitated to betake themselves to more favoured climes. Those which, through negligence or weakness, remain behind, drag out a miserable existence, and constantly perish from famine in the midst of frost and snow.

As our summer birds abandon us towards the close of autumn, we receive, at the same time, fresh supplies of feathered hordes

from the populous north. When the weather grows dull, we see passing through the misty air large detachments of Wood-cocks, of Lapwings, and of Plovers : these are followed by triangular bands of Cranes, Storks, of Teal, of Wild Geese, and Ducks. They delight in inundated fields, or reedy marshes, or spread themselves in the glades of humid and denuded woods. They continually utter clamorous and melancholy cries, in accordance with the bleak and wintry scene around them. It is a most curious circumstance to observe that the Cranes leave and return every year, with marvellous exactness, on the same days.

The *Palmipedes* and *Grallæ* come to us every winter from the northern climates, whither they are driven by the ice, and return in spring to their cold and humid habitations. The insectivorous and granivorous races return with the flowers and fine weather, from southern regions, to their native country, allured by the expectation of renewed enjoyment and abundant food. It is at the periods of the equinoxes that these great voyages of birds are performed. These are also the periods of great winds, as if nature had intended that the birds should be thus assisted in their flight. The cold which drives the birds of the polar regions into more temperate climates, sends those of temperate climates into the hot countries. But on the first indication of summer the hot climates send back to the temperate their aerial inhabitants, and the temperate send back to the cold regions their native tribes. Thus there is a general concentration of birds towards the torrid zone in winter, and a general dispersion towards the poles in summer.

The triangular figure which migrating birds adopt in their flight is the most favourable for cutting the air. The bird placed at the point is the most fatigued of the entire band ; accordingly each takes this place in turn. The migrations of fishes are conducted in the same manner : the most robust places himself at the head ; the other males follow, and the females and young come last. When the ranks of the Storks are broken by the wind, they condense into a circle ; they do the same when attacked by an Eagle. Thus it appears that whatever the migrations of birds may be, yet do they all adopt a peculiar country—each species has its distinct and never-varying *habitat*, where at a particular period of the year it may certainly be found. In the study of the natural history of the feathered tribes, it is of great importance to remember this fact, and to note with exactness the times and seasons of departure and return. Nothing is more remarkable, nothing more truly wonderful in nature, than the regularity and celerity of these annual migrations ; the immense extent of illimitable space which the birds traverse, guided only by an unerring instinct ; the intuitive knowledge which

they seem to possess of the very day and hour of departure ; the common consent with which they act, and the certain appointed order which they appear to preserve in their flight, all are evidences that a higher wisdom than mere animal intelligence, or than even human reason, must direct their motions.

THOMPSON, in his *Note Book of a Naturalist*, has well observed, "The migration of birds is one of the most interesting features in the economy of nature, whether as regards the great diversity of species it embraces, or the manner and seasons in which it is performed. With respect to those which arrive in the autumn, and leave again as soon as spring returns, there is less to wonder at, and there is less degree of instinct displayed. The different wild fowl, and some few land birds, whose *habitat* is peculiarly in the north of Europe, travel southward only as they are driven on in search of food by the rigour of winter. They have no fixed destinations, and are mostly on the move from spot to spot, many of them in flocks, as the circumstances of food and safety influence them ; and notwithstanding the vast flights which migrate to this country, it must be borne in mind that, perhaps without an exception, there is not one of the varieties which is not to be found as indigenous. That the Wild Fowl should prefer the solitudes and morasses of the north for the purpose of breeding is natural ; but that Larks, Fieldfares, Thrushes, &c. should leave a country at the moment when the supply of food would appear to be inexhaustible, is indeed surprising, and can only be accounted for by looking to higher causes.

The Swallow tribe, and many other species of birds, migrate without any apparent ostensible cause, leaving climates in every respect adapted to their habits, for those which can offer them at the best but a short and precarious season ; unless, indeed, they come as humble instruments of an all-directing Providence, to save us, as it were, from one of the plagues of Egypt, by ridding us of the myriads of flies which would otherwise infest us. The distribution of other migratory birds leads to this belief :— Storks, for instance, which rarely visit this country, are numerous throughout Germany and Holland, where frogs abound. The benefit they confer is so great, and so much appreciated, that they are especially protected, and a fine is imposed on the destruction of them. These birds, the Swallow tribe, and some others, return to their old accustomed quarters with each succeeding spring, reoccupying the old spot, and, indeed, the old nest, should it not have been destroyed in the interim. The instinct which drives them across the waters is almost less to be wondered at than this effort of memory, for it can be called by no other name.

Of all the phenomena connected with migration, one of the

most interesting is, that certain land birds leave us in the spring to nidificate in other countries,—a fact to be accounted for only by looking to higher causes. The regions of the East would, doubtless, supply the Swallow with food inexhaustible throughout the year; the Nightingale, and other warblers, would find no difficulty in supplying their wants in those genial climes; and yet, urged by an irresistible and regularly recurring impulse, they launch forth on a wearisome and perilous voyage to fulfil their high mission. The same principle must apply to those birds which hibernate with us. The cone of the fir-tree is nearly as abundant as in the north, and yet the Cross-bill, Hawfinch, and Chatterer, leave us; berries are as plentiful, and still the Fieldfare and Redwing return in flocks. As regards the *insectivores*, I believe them to be commissioned by an all-wise and all-beneficent Providence, to free us from the crowd of insects which would otherwise infest our dwellings, and destroy the labours of the field; and how greatly do they add to our enjoyments and feelings of cheerfulness by their beauty, motions, and melody! May not the return of the migratory birds to the north be designed for the same purpose? for how vast would be the abstraction from our enjoyments, were our woods and hedge-rows silent and tenantless. If our more southern winter is gladdened and enlivened by these sportive and happy beings, the vernal and summer delights of the inhabitants of the less genial regions of the north are increased, and the privations of winter, in a measure, compensated for by their return."

The following very suggestive remarks on this head, are from KNAPP's *Journal of a Naturalist*. "We know that all young creatures require particularly, compounded nutriment during their infant state; and nature (Divine Providence), as far as we are acquainted with it, has made in every instance provision for a supply of fitting aliment. In many instances where the removal of station could not be conveniently accomplished, instinct has been given the parent to provide the fitting aliment for its new-born young. Thus, insects, in some cases, store their cells with food, ready for the animation of their progeny; in others, place their eggs in such situations as will afford it when they are hatched. The *mammalia*—at least the quadrupeds belonging to this class, which could least conveniently move their station—have supplies given them of a milky secretion for this purpose. Birds have nothing of this nature, and insects no provision for their young; but they, of all creatures except fishes, can seek what may be required in distant stations with most facility. A sufficiency of food for the adult parent may be found in every climate, yet the aliment necessary for its offspring may not. Countries, and even counties, produce insects that differ, if not

in species, at least in numbers ; and many young birds we cannot succeed in rearing, or do it very partially, by reason of our ignorance of the requisite food. Every one, who has made the attempt, well knows the various expedients he has resorted to—of boiled meats, bruised seeds, hard eggs, boiled rice, and twenty other substances, that nature never presents—in order to find a diet that will nourish them ; but Mr. MONTAGUE's failure in being able to raise the young of the Cirl Bunting, (*Linnæan Trans.* vol. vii.) until he discovered that they required grasshoppers, is a sufficient instance of the manifest necessity there is for a peculiar food in one period of the life of birds ; and renders it probable that, to obtain a certain aliment, the Willow Wren and others of the insect and fruit-feeding birds, direct their flight to distant regions, and is the principal cause of their migration.

" It is some stimulus like this which urges that little creature, the Golden-crested Wren, that usually only flits from tree to tree, and never attempts upon common occasions a longer flight, to traverse the distance from the Orkneys to the Shetland Isles, over stormy seas that admit of no possible rest during its long passage of about fifty miles ! there it breeds its young ; but this one object accomplished, it leaves those isles, dares again its tedious flight, and seeks a milder clime. With us it never migrates, lives much in our fir groves during the winter, and breeds in our shrubberies in summer.

" Peculiar necessities, such as these, may incite the migration of many birds ; but that certain species, which lead solitary lives, or associate only in very small parties, should at stated periods congregate from all parts to one spot, and there hold a council on a removal, in which the very sexes occasionally separate, is one of the most extraordinary procedures that we meet with among animals." Extraordinary indeed ! may we not, in this, as in all the phenomena which we behold in the world of animated nature, trace the superintendence of an all-wise and benevolent Creator, by whose direction it is that " the Stork in the heavens knoweth her appointed time ; and the Turtle, the Crane, and the Swallow, observe the period of their coming."

CLASSIFICATION OF BIRDS.

"OF all the classes of animals," observes CUVIER, "that of birds is the most strongly marked, and that in which the species have the greatest resemblance, and which is separated from all the others by a wider interval. This fact, however, renders it more difficult to subdivide them." And out of this difficulty, we may add, has arisen an almost endless variety of systems, each naturalist endeavouring to establish that mode of arrangement which seemed to him the most convenient and distinctive. It is not our intention to enter into the particulars of these various methods of arrangement, through the labyrinths of which the student of natural history has frequently to pursue a particular species, until he becomes fairly bewildered, but merely to give the outlines of those which have been most generally followed and adopted, on account of their obvious advantages.

WILLOUGHBY AND RAY'S SYSTEM.

We have placed these two together because they are essentially alike; Ray in his synopsis having followed, with but little variation, the method of the older naturalist, which method is, in fact, the basis of most of the systems founded on external characters. By these celebrated British naturalists, birds are separated into two grand divisions, termed Land Fowl, and Water Fowl; in the first division we have two sub-divisions, the former having crooked beaks and talons, and including not only the Eagles, Hawks, Vultures, Owls, &c., but also the Shrikes, Birds of Paradise, and various members of the Parrot tribe: and the latter with the bill and claws not so much curved; and here are included all the rest of the land birds. In the second division we find also two sub-divisions, viz. such as frequent water or watery places for their food, but having cloven feet, cannot swim; and such as are web-footed, and therefore good swimmers. The birds in this system are divided into numerous groups, in accordance with some peculiarity of habit, conformation, or colour of plumage even; but these we need not particularize.

THE LINNÆAN SYSTEM

We place next, because it is that to which reference is most frequently made by writers on natural history; PENNANT and LATHAM both adopted it with slight modifications, and on it is founded that of CUVIER. According to this system, birds are distributed into six orders:—1st. *Accipitres*, or Hawks, including all those birds commonly called rapacious, such as Eagles, Vul-

tures, Falcons, Owls, &c. 2d. *Picæ*, or Pies, divided into those with feet formed for perching, for climbing, for walking; here we have the Magpie, the Jackdaw, the several members of the *corvus* or Crow tribe, &c. 3d. *Anseres*, or Geese, divided into those with bill toothed, and bill without teeth. 4th. *Grallæ*, or Waders, divided into those which have feet four-toed and three-toed. 5th. *Gallinæ*, or Poultry. 6th. *Passeres*, or Sparrows, which order has four divisions, viz.: those with the bill thick; the upper mandible somewhat hooked at the point; upper mandible notched near the end; bill straight, simple, tapering.

CUVIER'S SYSTEM.

Here, too, we have six orders of birds, and subdivisions grounded as in the above system, mainly on the organs of food and prehension, that is, the beak and toes; the arrangement, however, is somewhat different, and the orders more subdivided. 1st. *Birds of Prey*, with strong hooked beak and sharp claws, divided into those which fly by day—as Eagles, Hawks, Vultures, &c.—and those which fly by night, as Owls, &c. 2d. *Climbers*, with two toes or claws, before and behind, as Woodpeckers, Cuckoos, Parrots, &c. 3d. *Gallinaceous Birds*, with a strong thick bill, nostrils large, and covered by a cartilaginous scale, and toes partly united at the base, as Peacocks, Pheasants, Common Fowls, Partridges, Pigeons, &c. 4th. *Passerine Birds*, without any of the characteristics above mentioned, divided into those with the beak notched on either side, as Butcher-birds, Flycatchers, Chatterers, Thrushes, Nightingales, Warblers, &c.; those with the mouth opening very far back, as Swallows, Goatsuckers, &c.; those with a strong conical unnotched beak, as Larks, Titmice, Buntings, Linnets, Rooks, &c.; those with a slender curved beak, as Hoopoes, Creepers, Humming-birds, King-fishers, &c. 5th. *Waders*, with long naked legs, divided into those with wings unfitted for flying, as ostriches; with very short or no hind toe, as Bustards, Plovers, Lapwings; with a long broad, strong, and generally sharp beak, as Cranes, Herons, Storks; with a long, slender, curved beak, as Curlews, Snipes, Woodcocks, &c.; with very long toes bordered by membrane, as Rails, Coots, Flamingoes, &c. 6th. *Swimmers*, with webbed feet, divided into those with the legs very near the tail, as Divers, Auks, Penguins, &c.; with very long powerful wings, as Petrels, Gulls, Cormorants, &c.; with a large fleshy tongue and a thick beak, covered with a softish skin, and finely notched at the edges.

BRISSON'S SYSTEM

Is a purely artificial one. It is composed of twenty-six orders, and one hundred and fifteen genera. The birds are classed:—

1st, according to the presence or absence of the membranes uniting the toes, and according to the greater or less perfection of such membrane, where it does exist ; 2d, according to the number and disposition of the toes ; and 3d, according to the form of the beak. The birds whose toes are without membranes compose the first seventeen orders. Those which have four toes, and the legs covered with feathers to the heel, are contained in the first fourteen. Those which have the four toes separated from their commencement are confined to the first thirteen. Those which have three anterior toes and one posterior are confined to the first twelve. The last nine orders are composed of birds whose toes are furnished with membranes in their entire length.

TEMMINCK'S SYSTEM,

Which was published in 1820, is founded upon the manners and organization of birds. It contains twenty orders, which are as follows :—1st, *Rapaces*, or Birds of Prey ; 2d, *Omnivores*, or General Feeders ; 3d, *Insectivores*, or Insect-eaters ; 4th, *Granivores*, or Grain-eaters ; 5th, *Zigodactyli*, having two toes before and two behind ; 6th, *Anisodactyli*, with three before and one behind ; 7th, *Alcyones*, or Halcyons ; 8th, *Chelidones*, or Swallows ; 9th, *Columbæ*, or Pigeons ; 10th, *Gallinæ*, or Poultry ; 11th, *Alectorides*, or Cock-like ; 12th, *Cursores*, or Runners ; 13th, *Grallatores*, or Waders ; 14th, *Pinnatipedes*, with only the rudiments of webs between the toes ; 15th, *Palminedes*, or web-footed ; 16th, *Inertes*, with wings unfit for flight.

THE QUINARY SYSTEM

Is so called because the species are divided into groups of five, having certain common characteristics or affinities. The leading divisions, or orders, are as follows :—1. *Raptore*s, Birds of Prey, including Vultures, Falcons, Owls, &c. ; 2. *Incessores*, Perchers, divided into Cleft-bills, Toothed-bills, Conic-bills, Slender-bills, and Climbers ; 3. *Rasores*, Scratchers, as Doves, Pheasants, Grouse, Ostriches, &c. ; 4. *Grallatores*, Waders, as Cranes, Herons, Snipes, Rails, Plovers, &c. ; 5. *Natatores*, Swimmers, including most of the Aquatic Birds. These orders are divided and subdivided into Tribes and Families of five, but some of the links of the chain which MR. VIGORS has ingeniously constructed are yet wanting.

The beauty and convenience of this system must be acknowledged, as well as the classic taste and learning displayed in the nomenclature ; but will it bear the test of further research into the as yet comparatively unexplored fields of natural history ?

We hope that it may, but our hope is mingled with fear. After all, however, every classification of living creatures made or attempted, must be, to a certain extent, artificial ; as MACGILLIVRAY well observes : " Species only exist in nature ; and genera, families, orders, and all other groups, are merely ideal associations made for convenience, and therefore more or less arbitrary." A system of classification we must have, or how are we to arrange, in anything like available order, the immense accumulation of facts which preceding naturalists have collected, and to which additions are daily being made ? How are we to know where to look for particulars of a distinct species, or to deposit a particular fact, if there is no certain place assigned for it in the vast magazine of natural history ;—no class, no order of arrangement ? Like the naturalist, Buffon, we would lay much greater stress on *facts* than systems, but we would not, like him, abandon system altogether, " because it aids the memory, and, if not conducted in a manner altogether arbitrary, serves to show the actual inter-ap-proximation of beings in nature itself."* Yes, a system we *must* have, but why twenty different ones ? This is a great obstacle to the study of natural history, and should be remedied. In this, as well as in every branch of physical science, we want agreement and uniformity in its professors and modes of instruction. We know that there are, in the case of birds especially, obvious difficulties in the way of one general method of classification, and great temptation to multiply systems, but we trust that they may be eventually overcome ; and in the mean time, " the only alternative of the naturalist who desires to be useful is accuracy of description."†

In "Selby's Illustrations of British Ornithology," 2 vols. 8vo., will be found a well-arranged Synoptical Table of the Land and Water Birds of Britain ; and attached to each species is a very complete list of synomyms, and works from which they are taken, extremely useful as references to the authorities which should be consulted by the student in Ornithology, to whom may be recommended "Latham's General History of Birds;" "Donovan's British Birds;" "Selby's Complete British Ornithology;" "Mudie's Feathered Tribes of the British Islands;" "White's Natural History of Selborne, edited by Jesse ;" and for Song Birds, especially, Bolton's beautifully illustrated "History of British Song Birds."

According to MACGILLIVRAY, the list of British Birds may be divided as follows :—Permanently resident and breeding species, 143 ; summer birds which breed with us, 44 ; winter residents, 36 ; stragglers from the north, 23 ; stragglers from the south and east, 55 ; stragglers from the west, 19 ; total number of species, 320.

* Griffith's Cuvier, vol. vi. p. 95.

† Ibid.

Respecting the System of Classification adopted in the present volume, BECHSTEIN thus writes :—

In treating of the history of Cage-Birds, many different methods of classifying them presented themselves to my notice. I might, for instance, arrange them partly according to their size—partly according to their peculiar qualities. I might first have spoken of those which delight the ear with their song, and then of those which we prize for the beauty of their plumage. I might have divided them into foreign and indigenous species; or made a distinction between those which are tameable only when young, and those which may be tamed when full grown. As none of these systems, however, seemed to me to possess any essential advantage over the other, I have decided on one which will be found both clear and methodical. It has moreover the advantage of being analogous to that system usually adopted in ornithological works, which renders a comparison between the following and other accounts of the same bird less difficult. I have only to mention, that birds which possess common characteristics, especially of beak and claws, are arranged in the same species, and that several analogous species form an order. Thus the different kinds of Owl belong to one species; while both Hawks and Owls are arranged together under the order, “*Birds of Prey.*”



(A.) LAND BIRDS.

I.—BIRDS OF PREY.*

BIRDS of prey, which live on flesh, or by slaughter of other animals, have a curved, hooked beak, and strong feet, with sharp claws. These birds are used in falconry and bird-catching; as, for instance, many kinds of falcons are trained to seize other birds; and as Owls are used to attract small birds to the barn-floor trap, and Rooks to the decoy hut. As birds of prey neither sing nor learn to speak, are copious in their excrements, and generally difficult to tame, it is not probable that amateurs will often wish to keep them. There are, however, three species, which, on account of their beauty, facility of domestication, or engaging habits, form exceptions to this rule, namely, the Kestrel, the White Owl, and the Little Owl.

ADDITIONAL.—“Birds of this order,” says MACGILLIVRAY, “occur in all countries, and are characterized by their rapacious habits, solitary disposition, great quickness of sight, and powerful flight. They may be arranged in three families: *Vulturinæ*, *Falconinæ*, and *Striginæ*, representatives of all of which occur in Britain. Of the first, however, only a single individual is recorded as having been obtained in England; but of the second, nineteen, and of the third ten species, belong to our Fauna.” *Raptrices*, or Plunderers, is the term applied by this author, as by several others, to the present order of birds.

* *Accipitres. Raubmösel, BECHSTEIN.*

INLAND BIRDS,
CAPABLE OF BEING TAMED WHEN OLD.

1. THE KESTRIL.

Falco Tinnunculus, LIN. *Cresserelle*, BUß. *Der Thurmfalke*, BECH.

Description.—The Kestril is as large as the collared Turtle-dove, namely, about fourteen inches in length, of which the tail measures six inches. The folded wings cover two thirds of the tail: the beak is ten lines long, very much curved, toothless, and in colour of a bluish black. The iris, the feet, and the naked membrane above the beak near the forehead, which is called the cere, are yellow; the foot, *i. e.* the naked part from the toes to the first joint, is two inches high. The female is not only one third larger than the male, but, as is common among birds of prey, quite distinct in colour. They are both handsome birds. In the male the top of the head and the tail are light grey, the under part of the latter being marked with a broad black stripe; the back and the wing coverts a red brick colour with black spots; the under part of the body a rust rose colour with longitudinal black marks; the leg and rump feathers of the same hue; the tail feathers dark brown, spotted with white on the inner side.

In the female the back and wings are of a beautiful rust colour, with numerous black transverse stripes; the head light reddish brown, also striped with black; the tail similarly striped, having the same transverse streak at the end as the male. In both, the point of the tail is very pale in colour.

Habitat.—This bird is met with all over Europe, especially in such woody and mountainous regions as abound in precipices, or ruined castles. It is a bird of passage, departing with the Larks in October, when it may be seen in couples, hovering in the air over a mouse or a Lark. It returns in March.

If an old bird be taken, it must be kept in a wire cage, but when reared from the nest, it may be allowed to run about, and to perch outside the window and fly out; for when once accustomed to dogs and cats, it is not disposed to leave the house or barn in which it is confined.

Food.—When wild, it lives chiefly on small birds and mice; in the absence of these, it is content with beetles and grass-



George Edwards

Lithnco.

KESTREL.
Male & Female

hoppers. When confined, it is to be fed on birds, mice, and a little fresh meat. If fed with fresh bird's flesh, or sheep's liver and lights, it becomes quite tame, and even if caught when old, does not seem to desire its liberty.

Breeding.—The Kestril's nest is to be found in crevices of rocks, high towers, mountain castles, and lofty decayed trees. The eggs, yellowish red, with red and brown spots, are generally five or six in number. At first the young are covered only with white down, and may easily be reared on chopped meat; they soon perch on the hand, learn to know their feeder, and follow him whenever he calls.

Mode of Capture.—The old birds may be caught on the nest at the time of feeding the young, with strong limed twigs. Another mode is by placing what is called a Hawk-basket, having in it a Lark, or a mouse in a lure, in some spot which the birds frequent; this trap is elevated on four stakes, and resembles in appearance a common meat safe; four upright posts are set up in the ground at such a distance, as to resemble the legs of a moderately large table; they are concealed near the ground by a board, and at the sides by a net; at the top, on two sides, run iron rods, on which is fastened, by means of rings, a net to cover the whole; in the middle is placed a treddle, connected with a piece of wood, to which is attached a heavy weight. The Kestril sees the lure, flies into the basket, throws down the treddle, the weight falls, and draws the net over him, and he is caught.

Attractive Qualities.—This bird is rendered agreeable not only by its plumage and his engaging habits, but also by its ringing cry, *kli, kli, kli*, which it repeats in quick succession. If many, however, are together, the cry becomes wearisome. The Kestril, like other birds of the same species, may be trained to the chase, and, as before said, may, when reared from the nest, be accustomed to considerable liberty, even when kept in a large town. Care however, must be taken in September and October, when these birds migrate, not to let the captive be in the open air all day, lest it be enticed away by its comrades.

ADDITIONAL.—Of this, which is one of the most common, as well as the most beautiful species of the British *Falconinæ*, many interesting particulars are furnished by MUDIE, MACGILLIVRAY, YARRELL, and other naturalists, who have had better opportunities of observing its habits and characteristics than BECHSTEIN

probably ever enjoyed. The first of these authorities describes it as a sort of intermediate bird between the Hawks and Owls : " Its onward flight," he says, " has not the dash and rapidity of the former ; but its power of hovering over the same spot, in defiance of the wind, is much greater, and when that is necessary, it comes down in beautiful style." This habit of hovering for a while over a particular spot, has gained for the bird two of the names by which it is popularly known in this country—the Wind-hover, and the Stannel, or Stand-gale, as it is more correctly pronounced. The bird is also sometimes called Ston-gale, Stem-gale, Keelie, and Sparrow-hawk ; the latter appellation, however, properly belongs to another bird of the same genus, the *Falco nisus* of LINNÆUS, the *Accipiter nisus*, of MACGILLIVRAY, who in his animated description of the Rapacious Birds of Britain, says that "The Kestril is easily tamed; and according to WILLOUGHBY and others, was formerly employed by idle people for seizing small birds and young Partridges."

From a very curious work on Falconry, by DAME JULIANA BERNERS, frequently reprinted in the fifteenth, sixteenth, and seventeenth centuries, we learn that the Kestril ranked very low as a sporting bird. After stating that the Eagle, the Vulture, and the Merlin of their nature belong to an emperor ; the Gyr falcon and the Tercel to a king ; the Falcon-gentle and the Tercel-gentle to a prince ; the Sparrow-hawk to a priest ; the Musket to a holy-water clerk ; it concludes with assigning the Kestril to a knave or servant. MUDIE speaks of it as " Much less bold and noble in its hunting than the Merlin," although BUFFON tells us of the *Cresserelle*, as it is called in France, that it sometimes carries off a Red Partridge much heavier than itself ; and that it often also catches Pigeons which straggle from the flocks, while its most common prey, next to field mice and reptiles, is Sparrows, Chaffinches, and other small birds. That it is a great destroyer of field mice, and therefore a friend to the agriculturist, is clearly shown by WATERTON ; and SELBY relates some curious particulars with regard to its fondness for coleopterous insects, which it seizes and devours while on the wing.

" On his *librating* wing he was oft seen **apart**,
And appeared on his prey ever ready to dart,"

says JENNINGS, in his *Ornithologia*, thus describing in a word that habit of the bird to which allusion has been before made ; and of which GILBERT WHITE thus speaks : " The Kestril, or Wind-hover, has a peculiar mode of hanging in the air in one place, his wings all the while being briskly agitated." The Kestril builds no nest for itself, generally appropriating the deserted nest of the Crow or Magpie to its own use, laying four or five



WHITE OWL.

pale reddish eggs. When pinioned it will climb up a cage side, like the Parrot, holding on by the bill. This bird is easily tamed when taken from the nest, and frequently trained to pursue small birds, such as Quails, Snipes, and Larks.

MR. WATERTON is of opinion that a large proportion of those bred in England leave it in the autumn, to join the immense flights of Hawks which are seen to pass periodically over the Mediterranean, towards the African coast.

2. THE WHITE OR BARN OWL.

Strix Flammea, LINN. *Effraire ou Fresiae*, BUF. *Der Schleiereule*, BECH

Description.—This handsome bird is about the size of a Rook, that is, fourteen inches long, of which the tail measures five inches; the beak is one inch long, and white; the feet are plumed with short feathers, the root of the foot being two inches high; the nails are blackish, that on the middle toe being toothed on the inside; the countenance is enclosed in a heart-shaped veil of white and chestnut coloured feathers; the iris is dark yellow; the upper part of the body a reddish ashen grey, which appears mottled, and is covered with lines of small black and white spots like pearls; the under part of the body is a pale reddish yellow with blackish spots; the quill and tail feathers are a rusty yellow, with dark ashen grey irregular stripes; the first quill feather is strongly indented on the outside.

Habitat.—In Germany this Owl inhabits the most populous towns and villages, old castles, churches, barns, and similar lurking places. When confined, it must be chained to a perch, or kept in a large cage, as it kills and eats all small birds.

Food.—In a wild state it feeds on mice. When confined, it may have mice and small birds given to it. At first it is unwilling to eat, and in the breeding season is very difficult to manage; at any other time it is only necessary to put mice and birds in the cage, with the certainty that the bird will eat them in the night, if undisturbed.

Breeding.—The nests are to be found in crevices of old walls; the young birds are more easily tamed than the old ones.

Mode of Taming.—As they not only sleep in barns, but go there to catch mice, they may sometimes, and especially in winter, be taken by putting a sack net before the air-holes.

Attractive Qualities.—The Barn Owl is a handsome bird, but utters a mournful cry, on which account country people have designated it the bird of death.

ADDITIONAL.—To this bird MACGILLIVRAY has given the name of the European Screech Owl, to distinguish it from an American species with which it has often been confounded. With us it is the most common bird of its family, and is known by the several names of the Barn Owl, Church Owl, Screech Owl, White or Yellow Owl, Howlet, Hoolet, and Gillihowter. The author above named gives the following account of its habits:—“The Barn Owl chooses for his place of repose some obscure nook in an old building, the steeple of a church, a tower, a dove-cot, or a hollow tree. There he remains from sunrise to sunset, in a nearly erect posture, with retracted neck, and closed eyelids, dosing away the hours in which, from the structure of his eyes, he is unable to approach his prey, and waiting for the return of twilight. If approached in this state, instead of flying off, he raises his feathers, hisses like an angry cat, clicks his bill, and thus threatens the intruder. Should he by an accident be driven abroad, he seems dazzled and bewildered. Incapable of distinctly perceiving the objects around him, he flits about with an unsteady flight, and is glad to betake himself to some dark retreat, where he may be sheltered from the light, as well as from his numerous enemies.

“But although the Barn Owl is so imbecile by day as to suffer itself to be insulted with impunity by the pettiest aggressor, it assumes a very different character when darkness restores to it the faculty of clearly distinguishing objects. By watching near its haunts, or taking his station in the neighbourhood of some farm-steading frequented by it, one may dimly see it advance with silent and gliding flight, skimming over the fields, shooting along the hedge-bank, deviating this way and that, and now perhaps sweeping over head, without causing the slightest sound by the flappings of its downy wings. On perceiving an object, it drops to the ground, secures its prey in a moment, and uttering a shrill cry, flies off with it in its claws. In a little time it returns, and thus continues prowling about the farm-yard for hours.”

MR. WATERTON, whose opportunities of observing its habits are unrivalled, he having in a manner domesticated this species, informs us that it carries off rats, and occasionally fish. “Some years ago,” he says, “on a fine evening in the month of July, long before it was dark, as I was standing on the middle of the bridge, and minutely the Owl by my watch, as she brought mice into her nest, all on a sudden she dropped perpendicularly into the

water. Thinking that she had fallen in epilepsy, my first thoughts were to go and fetch the boat; but before I had well got to the end of the bridge, I saw the Owl rise out of the water with a fish in her claws, and take it to the nest."

The same author states that when this bird has young, "it will bring a mouse to its nest about every twelve or fifteen minutes. But in order to have a proper idea of the enormous quantity of mice which it destroys, we must examine the pellets which it ejects from its stomach in the place of its retreat. Every pellet contains from four to seven skeletons of mice. In sixteen months from the time when the apartment of the Owl in the old gateway was cleaned out, there has been a deposit of above a bushel of pellets."

"The shriek of the White Owl," continues MACGILLIVRAY, after quoting the above, "occasionally heard at night, and usually in solitary places, which few persons enter without some feeling of awe, has given to it a kind of mysterious character with the vulgar; and it must be confessed that, independently of any superstitious feeling, its cry coming unexpectedly on the ear, in a church-yard, or among the crumbling ruins of some monastery or castle, is little calculated to inspire pleasant feelings. The White Owl has no other cry, except the hissing noise which it makes. The snoring sound heard from its nest is, MR. WATERTON informs us, the cry of the young for food."

3. THE LITTLE OWL.

Strix Passerina, LIN. *Cheveche, ou Petite Chouette*, BUF. *Der kleine Kauz oder die Zwergeule*, BECH.

Description.—This bird is not much bigger than a Rock Thrush, though its thick head and close feathers make it appear larger than it really is. Its length is eight inches, of which the tail measures three inches. The folded wings reach almost to the end of the tail; the beak is nine lines long, brown at the root, and light yellow at the point; the iris pale yellow, though in winter inclining to green; the feet one inch and a quarter high; the claws blackish; the upper part of the body is light brown, with round white spots, which are largest upon the shoulders and back; the under part white, speckled with dark brown, slightly mixed with rust colour; the quill feathers are dark brown, with round white spots; the tail light brown with similar spots, though larger and rust coloured, and running together almost like stripes. The female is somewhat lighter in colour.

Habitat.—In a wild state this Owl inhabits old buildings, towers, church walls, and high trees. In such situations its nest may be found. If allowed to be at liberty in a room, no other bird must be suffered to come near, as the owl would kill it. It is best hung before a window in a large kind of Quail's cage, which may be watched from the inside.

Food.—In a wild state it generally feeds on house and field mice, beetles and crickets. I have also found in the undigested remains which, like most birds of prey, it disgorges, large quantities of the stones of the fruit of the red cornel tree (*Cornus sanguinea*), which it must therefore eat. When confined, both old and young birds may be kept long in health on dried mutton, from which the skin, bones, and fat, have been removed, and which has been allowed to soak in water two days before giving it. By the use of this food also, the bad smell of the excrements may be avoided. Three quarters of an ounce of this meat a day is enough for the bird, with occasionally mice and small birds, which last it swallows quill feathers and all. It will eat as many as five mice at a meal. Even in summer it becomes lively about 2 P.M., and begins to want its food.

Breeding.—The nest is found in crevices of walls and hollow trees. The female in confinement lays, even without contact with the male, two round white eggs. The young ones may be easily reared on meat, especially pigeon's flesh. Before the first moult, they are, instead of the usual light brown, of a reddish grey, woolly on the head, and slightly clouded with white. The great white round spots on the back appear more distinct, and the reddish white of the under part of the body has thinner grey stripes on the breast and sides.

Diseases.—If they are not sometimes fed with mice or small birds, the hair and feathers of which clear out their crops, they die of decline.

Mode of Taking.—If the place to which they resort be known, they may easily be caught by putting a sack net before the hole, and intercepting them as they fly out in the twilight.

Attractive Qualities.—They are very clean birds, collecting all their excrement into one place. Their singular gestures are amusing, but the hoarse cry, and restlessness at pairing time, is very disagreeable.

ADDITIONAL.—This is a rare bird in Britain, although common enough in Germany and many other parts of the European continent; it is sometimes called the *Passarine*, or Hawk Owl. English naturalists say but little about it. YARRELL's account of the bird consists principally of a repetition of BECHSTEIN, with an enumeration of the different specimens which he has seen or heard of in this country, amounting in all, to about twenty. MUDIE says that "when seen here it is generally in the autumn, so that it may be blown across in the course of its autumnal migration; but it is worthy of remark, that it is not confined to the mere verge of the eastern sea, as European birds generally are when they drift, but has been noticed also in the west and south-west." Further that "it resorts to the vicinity of human dwellings, and nestles, and generally hides itself for the day, in holes of old walls. It is an industrious and successful mouser, and though its wings are not very long, it is more quick in the use of them than some of the larger species. Its flight is not confined to the twilight, for though that be the time when it is most successful in mousing, it hawks especially on dark and cloudy days, during which it may be seen in pursuit of swallows, opposing a direct flight to their wheeling one, and endeavouring to meet them as they come round." The ordinary cry of this bird, which it repeats flying, is *Poupou, poupou*; but when it settles down it emits a louder and clearer cry, something like—"Aime, héme, ésmi."

II. THE CORVIDÆ,* OR CROW TRIBE.

BIRDS of this class have a somewhat compressed, more or less curved, knife-shaped, moderately sized bill. Their feet are short, generally strong, divided, and adapted partly for climbing, partly for walking. They feed on insects, worms, the flesh and excrement of other animals, and sometimes also on seeds and fruits. Some few are valued for their song, but the majority for their plumage, or powers of speaking.

ADDITIONAL.—The first and most important family in MACGILLIVRAY'S 6th order, the *Vagatrices*, or Wanderers, are the Corvine birds, or Crows; a family containing some of the most familiar and interesting of our native species. Many of them are almost indiscriminate feeders, and hence the term *Omnivora* has been applied to the whole order, although it is by no means a satisfactory distinction. In all parts of the globe birds belonging

* *Coraces. Krähenartige Vögel*, BECHSTEIN.

to this order may be found ; many of the species are gregarious, especially those which feed on worms, larva, or seeds ; they walk with ease, are good leapers, and their flight, which is strong, is generally performed by regularly timed beats. The nest of the larger species is rudely constructed, that of the smaller more neatly ; the young remain until fledged.

INLAND BIRDS CAPABLE OF BEING TAMED WHEN OLD.

4. THE GREAT OR ASH-COLOURED SHRIKE, OR BUTCHER-BIRD.

Lanius Encubiter, LINN. *Pie griesche grise*, BUF. *Der geimeine würger oder grosse Krichalster*, BECH.

Description.—The Butcher-bird is about the size of the Red-wing, though a little longer, being nine inches in length, of which the tail measures three inches and three quarters, and the beak eight lines. The folded wings cover a third part of the tail. As in all Shrikes, the beak is straight at the root, but curved over at the end, and provided with a small prong or tooth. It is black, except at the under part of the root, where it is yellowish white. The iris is dark brown, the feet a glossy black, and one inch in height. The whole upper part of the body is a light ashen grey, passing into white at the rump feathers, over the eyes, on the forehead, and on the shoulders. A broad black stripe runs from the nostrils, between the eyes, to the region above the temples, which are white. The under part of the body is white, with dusky, dark brown wavy lines, more distinct in the female than the male. The larger wing coverts are black, the lesser ashen grey. The black quill feathers, being white at the root and point, make two white spots on each wing. The tail is wedge-shaped, having the external feathers almost entirely white, and the middle feathers black.

Habitat.—This is not a bird of passage. It frequents groves, thickets, and the outskirts of larger woods, and also bushy parts of the open country. It perches chiefly on the tops of trees. In confinement it is a very courageous and rapacious bird, and therefore cannot be allowed to run about where other birds are. It is best kept in a large cage—if possible, made of wire.

Food.—In summer the Shrikes chiefly feed on beetles, crickets, blind-worms, lizards ; and on mice and small birds, only when these are not to be procured. In winter, however,

they catch Yellow-hammers, Siskins, mice, moles, &c. In pouncing on their prey, the Shrikes make a peculiar swoop, in order to seize it by the side; yet, as they cannot use their claws, like other birds of prey, they are often obliged to content themselves with a beakful of feathers.

If an old bird be caught, it may at first be fed with small birds, mice, beetles, and crickets, given to it alive. It must, however, be left alone, otherwise it will touch nothing. When it has once eaten, it will then take fresh meat, and become accustomed to the universal paste, especially that made of wheat meal. For their size, these Shrikes eat a great deal—at least, an ounce of meat at a meal. They are fond of having a forked bough, or crossed stick, fixed in the cage. They also bathe freely.

Breeding.—The nest, made of heath, grass-stalks, wool, and hair, woven together, is found upon trees. The female lays five to seven greenish eggs, often having olive green, or a few violet grey spots at the thick end. The young ones, if taken, may be fed with raw flesh (always the best way to tame Shrikes), and some learn to feed from the hand.

Mode of Taking.—The Butcher-bird is caught in traps, baited with small birds; or by means of limed twigs, under which is placed a nestful of young birds, which, when hungry, attract him by their cry. In autumn and winter, he will fly at cages hanging outside a window. He may by this means be deceived: by putting the cage into a sort of box, with a treddle, the slightest contact with which closes the lid over him. These preparations are especially necessary for those who would have birds to fly in and out at will.

Attractive Qualities.—The call of the Shrike is like the *Gehr! gehr!* of a Lark. Like the Nutcracker, he imitates many single notes, but does not succeed in the song of other birds. His own flute-like tone is very beautiful, resembling the whistling of the Grey Parrot. In producing it his throat is distended like that of the tree frog. It is to be regretted that he sings only in pairing-time,—from March to May,—and that the song is interrupted by harsh and croaking passages. Both sexes sing. The bird might possibly be taught to speak, as it sometimes utters notes which bear a close resemblance to the human voice.

The bird-catcher who wishes to catch Falcons, should have

one of these birds near his trap. It betrays the approach of the Falcon, even at a great distance, by its fixed attention and gestures ; and when the Hawk pounces on it, slips with a cry into the cage, or other asylum, placed near the trap for its protection. As this bird utters the same cry when at liberty, it is a common saying among the people, that he warns the little birds through envy, that he may have them all to himself.

ADDITIONAL.—This bird, although plentiful in Germany, is with us merely a straggler, and, according to MUDIE, “ one that does not make its appearance at any usual time of migration, the few specimens that have been found in the country having been in winter ; and certainly not as regular winter migrants, the rare ones of which come late, and after very severe weather.” This author further states, that “ the bird cannot, indeed, be regarded as much of a migrant, in latitude, in any country, for it rather follows the habit of the resident *Insectivora*—the woodlands in summer, and the lower plains in winter. The British specimens are, in all probability, blown by east winds from Germany.” This, and the Red-backed Shrike (*Lanius collurio*), are spoken of by WHITE, as *rare birds* in this country.

MACGILLIVRAY also, describes it as an occasional or accidental visitant only ; and YARRELL doubts if it ever breeds here. KNAPP, on the contrary, in his *Journal of a Naturalist*, says : “ The Great Shrike or Butcher-bird, is not uncommon with us, and breeds annually near my dwelling. It is one of our late birds of passage, but its arrival is soon made known to us by its croaking unmusical voice from the summit of some tree. Its nest is large and ill concealed ; and during the season of incubation, the male bird is particularly uneasy at any approach towards his setting mate, though often by his clamorous anxiety, he betrays it and her to every birds-nesting boy. The female, when the eggs are hatched, unites her vociferations with those of the male, and facilitates the detection of the brood. Both parents are very assiduous in their attention to their offspring, feeding them long after they have left the nest ; for the young appear to be heavy, inactive birds, and little able to capture the winged insects which constitute their principal food. I could never observe that this bird destroyed others smaller than itself, or even fed upon flesh. I have hung up dead young birds, and even parts of them, near to their nests, but never found that they were touched by the Shrikes. Yet, it appears that it must be a butcher too, and that the name ‘ *Lanius*,’ bestowed on it by GESNER two hundred and fifty years ago, was not lightly given. My neighbour’s gamekeeper kills it as a bird of prey, and tells me he has

known it draw the weak young pheasants through the bars of the breeding coops ; and others have assured me that they have killed them when banqueting on the carcase of some little bird they had captured. All small birds have an antipathy to the Shrike, betray anger, and utter the moan of danger when it approaches their nests. I have often heard this signal of distress, and cautiously approaching to learn the cause, have frequently found that this Butcher-bird occasioned it. They will mob, attack, and drive it away, as they do the Owl, as if fully acquainted with its plundering propensities. LINNÆUS attached to it the trivial epithet ‘*Excubitor*,’ a sentinel ; a very apposite appellation, as this bird seldom conceals itself in a bush, but sits perched upon some upper spray, or in an open situation, heedful of danger, or watching for its prey. This Shrike must be most mischievously inclined, if not a predatory bird.—May 23d. A pair of robins have young ones in a bank near my dwelling ; the anxiety and vociferation of the poor things have three times this day called my attention to the cause of their distress, and each time have I seen this bird watching near the place, or stealing away upon my approach, and then the tumult of the parents subsided ; but had they not experienced injury, or been aware that it was meditated, all this terror and outcry would not have been excited.”

There is another reason given by YARRELL, for the term *sentinel* applied to this bird ; “it is used,” he says, “by falconers abroad when trapping Falcons. The Shrike is fastened to the ground, and, by screaming loudly, gives notice to the falconer, who is concealed, of the approach of a Hawk. It was on this account, therefore, called *excubitor*—the sentinel.” The generic name *lanius*—a butcher—comes from *lanio*, to cut or tear to pieces :

“ The Butcher-bird bold, like his kinsman the Shrike,
With his bill ever ready the death-blow to strike.”

5. THE LESSER GREY SHRIKE.

Lanius Minor, LIN. *Pie griesche d' Italie*, BUF. *Der graue Würger,*
oder kleine Krickelster, BECH.

Description.—This bird, about the size of a Lark, is eight inches in length, of which the tail measures three inches and one-third. The folded wings cover a third of the tail. The beak is glossy black, seven lines in length, straight at the base, like that of all other Shrikes, but somewhat bent over at the point, and provided with a small tooth. The iris is brown, the feet

black, tinged with lead colour, and an inch and one-third high. The forehead is black, and a broad black stripe passes between the eyes; the head, nape and sides of the neck, back, and upper tail coverts ashen grey, the last the lightest. The whole under part of the body white, the breast and belly having a tinge of rose colour; the wing coverts black, the smallest being bordered with ashen grey; the quill feathers black, the foremost leaving the half nearest the base white, which produces a white spot on the wings when folded. The tail is wedge-shaped; the two outermost feathers are white with black shafts, the third and fourth black, with white roots and points, the fifth and sixth altogether black.

The female is hardly to be distinguished from the male, except that she is somewhat smaller, that the stripe on the cheek is shorter and narrower, and that she has only one white tail feather.

Habitat.—The Lesser Shrike is a bird of passage, departing at the beginning of September, and re-appearing early in May. It frequents gardens in the neighbourhood of groves or forests, which at the same time are not far from ploughed fields and pastures. It perches on the tops of trees; easily descending into smaller bushes, and there lies in wait for insects.

In confinement a large wire cage is proper for it, such as is used for Larks, but with three perches. It cannot be allowed to range the room, as even when not pressed with hunger, it might chance, either from malice or the mere desire of showing its superior strength, to kill one of its companions.

Food.—When wild it generally feeds on beetles, cockchafers, crickets, breeze-flies, and other insects. It is only after continued wet weather that it sometimes kills a small bird.

If an old bird be captured, small birds fresh killed, beetles, cockchafers, &c., should be immediately thrown into the cage. Afterwards it will be content with raw or cooked meat. It is indeed a difficult bird to preserve, and costs both time and trouble; as for the first week it must have nothing but beetles and other insects, especially meal-worms. But when it is more accustomed to meat, it soon becomes so tame as to take it from the hand, or will even fly out, the moment the cage is opened, and perch upon the hand to be fed. I once had one, which ate the first named universal paste. Old birds can rarely be kept longer than two years, generally dying of decline. If

reared from the nest, they require much less attention, soon becoming contented with any kind of food.

Breeding.—The large, irregular nest of these Shrikes is generally found in a tree, in a garden, or in the outskirts of a grove. It is made of roots, green leaves, and wool, lined with wool and feathers. The female lays five or six reddish eggs; in colour a greyish white, spotted about the middle with brown and violet grey. The male assists in the hatching, which lasts fifteen or sixteen days. The young birds grow so quickly, and are so soon fledged, that notwithstanding the late arrival and early departure of this bird, it yet breeds twice in a favourable season. The young ones are fed with beetles and grasshoppers. Till the first moulting, they are entirely without the black stripe on the forehead; the upper part of the body is a dark ashen grey, marked hardly perceptibly with red; the under part white, tinged on the breast with yellow, and on the sides with red. They may be taken from the nest as soon as the tail begins to grow; and at first fed on ants' eggs, and afterwards with bread soaked in milk.

Mode of Taking.—They cannot be taken alive, except by putting limed twigs on the bush, or branch, on which they are observed to perch, when watching for insects. They are as incautious as they are afterwards docile, flying without hesitation into the snare.

Observations and Attractive Qualities.—The male is a bird of wonderful docility; the female, as is usually the case, does not sing. These Shrikes not only imitate, like others of their species, certain passages of other birds' song, but repeat the whole with the greatest exactness; and even seem to have little or no song of their own. For example, they repeat perfectly the song of the Nightingale, though wanting of course the round full tones; and that of the Lark. This power makes the Lesser Shrike a very desirable bird to the amateur. I have remarked that it seems to take especial delight in mimicking the call of the Quail. I possessed one which, however lively in its song, always stopped, in order to imitate the Quail's call, whenever it heard it; and the latter, before it became accustomed to the mimicry, would go furiously about the room, endeavouring to find its rival.

6. THE WOODCHAT SHRIKE.

Lanius Erythrocephalus, Collurio rufus, et Pommeranus, LIN. Pie griesche rousse, BUF. Der Rothköpfige Würger, BECH.

Description.—This bird is seven inches long, somewhat smaller, or at least more delicate than the last mentioned. The tail measures three inches and a half, a third of which is covered by the wings. The beak is eight lines long, has a distinct indentation, and is blueish black; the iris is yellowish blue; the feet one inch high, and as well as the toes blueish black. The forehead is black, and with it is connected a band of the same colour, running between the eyes, and behind the ears. The back of the head and the neck, are a beautiful reddish brown: the upper part of the back, brownish black; the middle, reddish ashen grey. The upper tail coverts are yellow and white. Some large white feathers on the shoulder, form, as in the Magpie, a great white spot on each side of the back. Above the nostrils the yellowish white, which is the prevailing colour of the under-part of the body, appears in two points. The sides are somewhat redder, and indistinctly mottled with grey; the smaller feathers of the wing coverts are blueish black, edged with yellowish white; the larger ones, and the quill feathers, black shot with brown. The quill feathers in front have white bases, which, when the wings are closed, form a white spot. The tail is black, passing over into brown; the outermost feathers white with a black spot in the middle, the rest white at the point, and the two in the centre, with the exception of the white bases, quite black. The female is exactly like the male, except that the colours, especially the reddish brown, are somewhat paler.

Habitat.—When wild it is a bird of passage, making its appearance at the end of April, and departing in the middle of September. It frequents mountains, woods, and plains full of bushes and trees, and especially congregates where horses are kept day and night on restricted pastures. In confinement it is kept in a wire cage.

Food.—In a wild state it feeds chiefly upon horse and dung-beetles, as well as on grasshoppers, breeze-flies, and other insects. In case of necessity it will attack young birds and lizards. When confined it must be treated as the preceding, but as it is even more delicate, it is better to rear it from the nest, than to tame it when old. It is fed from the first on raw meat.

Breeding.—It builds its nest in the thick branches of ligh trees, making it of the stalks of plants, moss, grass, swine's bristles, wool, and hair. The female lays, twice a year, six reddish white eggs, which are covered all over, and especially at the thick end, with distinct blood-red, and indistinct bluish grey spots. They are hatched in a fortnight. The nests are occasionally found in high sloe, maple, and other bushes. Till the first moulting, the young are on the upper part of the body of a dirty white, spotted with grey, on the lower part, dirty white and clouded with grey; the wing coverts are bordered with rust colour, the quill feathers and tail are a greyish black.

Mode of Taking.—A cruel way, though the easiest, as this is the least shy of all the Shrikes, is to take it in the nest with limed twigs. Like the preceding, it is fond of bathing; on which account, it may be caught by water-traps about noon, if laid in the neighbourhood of hedges. These Shrikes are often found drowned in large pools.

Attractive Qualities.—Although this Shrike appears to have almost as good a memory as the preceding, its song is not so pleasant, partly because its voice is not so agreeable, and partly because it introduces into the song which it imitates, some of its own harsh and discordant notes. It readily adopts the songs of the Nightingale, Linnet, Goldfinch, and Redstart. It is only in consideration of its beautiful plumage, that this Shrike can be deemed as desirable a bird for the cage as the foregoing.

THE LITTLE SHRIKE AND THE WOODCHAT SHRIKE.

ADDITIONAL.—RENNIE states of the first of these individuals of the *Laniidae* family, that it is certainly not a native of Britain, and of the second, that it is doubtful. MUDIE, however, asserts "that the Woodchat Shrike is a British bird, although rare; it is an occasional summer visitant, and does sometimes breed here, the nest having been found more than once in the county of Norfolk." WHITE speaks of a dead specimen which was sent him, but does not say where it was found. MACGILLIVRAY says, "only a few instances of the occurrence of this species in England are recorded;" and YARRELL enumerates several specimens, killed, or seen in Kent, Norfolk, Suffolk, York, and Worcestershire. The latter naturalist also tells us that, "in size, in most of its habits, and in its mode of feeding, the Woodchat resembles the common Red-backed Shrike, and like that species, is said to imitate the voice of several different small birds;" and quotes the account of the bird given by MR. J. D. HAY, in a communication

to the *Magazine of Natural History*, (vol. iv. p. 341), which is as follows : " It differs from *Lanius collurio*, in the choice of situation for its nest, placing it invariably on trees, and preferring the oak. The nest is fixed in the fork of a projecting branch, and is composed on the outside of sticks and wool, mixed with white moss from the bodies of the trees, and lined with fine grass and wool. Eggs four or five in number, rather smaller than those of the Red-backed Shrike, and varying much in markings ; the ground colour being pale blue in some, in others a dirty white, surrounded near the larger end with a zone of rust-coloured spots ; in some again, the markings and spots are of a paler colour, and more dispersed over the egg. It is not a wild bird, often building close to houses and public roads. It is abundant in some parts of the Netherlands, and arrives and departs about the same time as *Lanius collurio*."

7: THE RED-BACKED SHRIKE.

Lanius Collurio, LIN. *Lanius Spinitorquus*, BECH. *L'Ecorcheur*, BUF.
Der rothrückige Würger, BECH.

Description.—This bird forms a link between the Pies and singing birds, having many peculiarities in common with the latter. It is a little more than six inches long. The tail, of which a third is covered by the folded wings, is three inches and a quarter in length. The beak is thick, black, almost straight, being slightly bent at the point, and six lines long ; the iris is nut brown ; the feet, ten lines high, are, as well as the toes, of a bluish black. In the male, the head, the nape of the neck, the upper tail coverts, and the thighs are ashen blue ; above the eyes and on the forehead this colour is lighter. A broad black stripe runs from the nostrils between the eyes to the ears ; the back and the wing coverts are a beautiful reddish brown ; the throat, the rump, and the under-part of the body, white, tinged with red on the breast, belly, and sides. The pen feathers are blackish, the hinder ones having a wide border of reddish brown ; the tail is somewhat wedge shaped, having the middle feathers black ; the other feathers are white half way from the root downwards, and are besides tipped with white. The female is very unlike the male in appearance ; all the upper part of the body is rusty brown, somewhat inclining to ashen grey, on the nape of the neck and the tail coverts, and on the back and wing coverts, very slightly watered with white. The forehead and the part above the

eyes are yellowish white ; the cheeks are brown ; the throat, belly, and vent feathers a dirty white ; the neck, breast, and sides, are yellowish white, crossed by dark brown wavy lines. The pen and tail feathers are dark brown, the latter somewhat inclined to red ; the two outermost pen feathers are edged with white, and the rest, with exception of the four in the centre, have white points.

Habitat.—This is almost the latest bird of passage, arriving only at the beginning of May. Although it may be met with in the forest valleys where cattle pasture, it is more frequently found in the open country in hedges and bushes, especially in inclosures where horses and cows are kept. It migrates in August, even before the young birds have moulted, in large flocks. Like birds of the same species, this should be kept in a large cage by itself, as if allowed to associate with other birds it soon evinces its natural ferocity. Some years ago I caught one, which refused to eat for three days, although I offered him dead birds, beetles, and other insects. On the fourth day, when I thought he would be too weak to hurt other birds, and might, *perhaps*, if set at liberty, accustom himself to his food, I let him loose. No sooner was he free, than he seized and killed a Sparrow, before I could come to the rescue. I let him eat it, and put him back into the cage. From that time, as if his fury was satisfied, he ate all that was offered him.

Food.—When wild, it destroys great numbers of beetles, maybugs, crickets, grasshoppers, and especially breeze flies, which last are the favourite food of all the Shrikes. These insects it impales on thorns till it has collected enough for a meal. During continuous rainy weather, when insects are not to be found, it catches and impales field-mice, lizards, and young birds. It is incorrectly asserted that it does this to attract other birds to the spot. In confinement, its food is the same as that of the preceding species. Insects may be given it, mixed with the Nightingale's paste, to which it soon becomes accustomed, and now and then a little raw or dressed meat.

Breeding.—In a favourable season this bird breeds twice, choosing for its nest some thick bush, frequently the hawthorn. The nest is large, made of roots and coarse grass, mixed with layers of moss and wool, and lined with the finest root fibres. It lays five or six greenish white eggs, rather round in shape,

and spotted, especially at the thick end, with rust colour and grey. The period of incubation, in which the male also takes a share, is fourteen days. The young birds are like the mother, being on the upper part of the body and breast greenish grey, marked with dark brown wavy lines, and on the belly dirty white. If taken young, they are easy to rear, and should be fed at first with ants' eggs, afterwards with dressed meat, and finally, with bread soaked with milk. This last food they always like if accustomed to it from the first.

Mode of Taking.—The Red-backed Shrike is easy to catch. As soon as it arrives in May, the bushes, which are not many where it usually perches, must be noticed, and limed twigs set upon them : towards these it must be carefully driven. It is generally taken in a quarter of an hour. Success will be most certain if a beetle, grasshopper, or breeze-fly, be fastened near the limed twigs, by horse hair, so that it can flutter about. Care must be taken in removing the bird, as, like all Shrikes, it bites severely.

Attractive Qualities.—This bird occupies no mean place among the songsters, as its song is not only pleasant, but unintermitting. While singing it generally sits on a bush or the lower branches of some tree near its nest. The song is compounded of the songs of the Swallow, Goldfinch, Whitethroat, Nightingale, Red-breast, Wren, and Lark, as well as some harsh notes peculiar to itself. It generally adopts the song of neighbouring birds, and sometimes, through caprice, imitates that of some chance passer-by. It is, however, unable to mimic the songs of the Chaffinch and Yellow-hammer, perhaps, from some peculiarity in the construction of its throat. In the cage it adopts the notes of the birds which hang near it, and is always cheerful and attractive. The Red-backed Shrike is extremely expeditious in clearing a room of flies, catching them when on the wing, and if needles be stuck in a bough for him, spitting them with a very peculiar gesture. It is not worth while teaching it to whistle airs; for though it learns them quickly and well, it forgets them as soon, in order to learn new ones.

ADDITIONAL.—Most English naturalists term this bird the Red-backed Shrike ; in this country, where it arrives towards the middle of May, departing in September, it is by far the best known of the Shrikes. “It differs,” says MUDIE, “from the rest of our summer visitants, in being more numerous towards the

centre, or even the western side of the country, than in the south-east ;" and this testimony is confirmed by YARRELL, who informs us that " it is common about London, and in most, if not all, of the southern and western counties of England and Wales, going northwards from thence as far as Cumberland, in which county, as observed by Dr. HEYSHAM, it is rare. It does not appear to have been observed by ornithologists in any part of Ireland. North of London, on the east coast, it is found in Essex, Suffolk, Norfolk, and Yorkshire ; but occasionally only as far north as Northumberland, and the south-eastern part of Durham. It seems not to have been noticed in Scotland or its islands ; yet it visits Denmark, Norway, Sweden, and Russia. From thence southward, it is found in Germany, France, Spain, and Italy. Specimens were sent by KEITH ABBOT, Esq. to the Zoological Society, from Trebizond ; it also inhabits Egypt and North Africa, is included by VALLIANT among the birds of Senegal and the Cape of Good Hope, from which latter country specimens have also been brought by DR. SMITH."

GILBERT WHITE relates how, on the 21st of May, he procured a male Red-backed Butcher-bird, which the neighbour who shot it said might easily have escaped his notice, had not the outcries and chattering of the Whitethroats and other small birds drawn his attention to the bush where it was ; its craw was filled with the legs and wings of beetles ; and BLYTH, in remarking upon this passage in *The Natural History of Selborne*, says, "I am rather surprised that Mr. White was not familiar with this species, as it abounds in many parts of Surrey, Kent, and Sussex, where it is commonly called 'Jack Baker,' and is well known to all persons who take an interest in natural history. It arrives rather late in the season, and both sexes, I think about the same time, which is contrary to the usual habit of migratory birds ; some seasons they are much more plentiful than others. They are found generally about tall and thick maple, or hawthorn hedges, wherein they breed, and may be commonly seen perched on one of the highest twigs, or, like Fly-catchers, upon the bare branch of some tree growing out of the hedge, or sitting upon a post or paling, always in a conspicuous situation, where their vision can extend over a considerable range, and whence they often dart after the larger passing insects, or upon any small quadruped or bird that lucklessly comes within the sphere of their downward leaping flight ; or they slowly hover along the hedges, often remaining a long time suspended over a particular spot, and then, perhaps, advancing a few yards, and again remaining fixed in the air, and when at length they do settle, not unfrequently hovering for some time around the branch on which they are about to alight. When sitting watchfully upon a bough,

they often jerk the tail, another habit in accordance with the Fly-catchers, to which they are considerably allied. They subsist chiefly on beetles and humble-bees, and render essential service in spring by devouring great numbers of the large female wasps, destroying what would otherwise become the founders of colonies of these troublesome and destructive insects. I have taken four or five from the stomach of a single bird. Chaffers they seize, and then flying to a perch, transfer them to the foot, holding them up in one foot like a Parrot, while they pick them to pieces. When satiated, they eat only the abdomen, and impale the still living body upon a thorn, a habit common to all the genus. They prey also occasionally on small birds, lizards, mice, and shrews, and I have known several instances of their being taken in the nets of bird-catchers, when endeavouring to seize upon the *brace-birds*. They do not (like the *L. excubiter*) attack a bird upon the wing, but pounce down upon those which happen to be on the ground, or upon a branch beneath, in the latter case bearing down their prey to the ground, seizing it with both bill and claws, and expanding over it the wings and tail in precisely the manner of a Hawk, then despatching it, not by strangulation, but by biting and compressing the head, and picking a hole in the skull. It is then carried in the beak to the horizontal bough of a tree, where the Shrike places one foot upon its victim, and never leaves it I believe, when undisturbed, till all is finished." The average weight of the male bird is said to be about an ounce, and yet it will attack and devour birds and animals of considerable size : in the *Linnæan Transactions*, one is recorded to have been seen in pursuit of a Blackbird (vol. xv. p. 14).

When these birds are in full plumage, the red which covers their back and wings, though of a brownish tint, is very rich ; and as they jerk through the air, it has the appearance of flashes of dull fire, on which account they have been called "flashers," or "flushers."

8. THE RAVEN.

Corvus Corax, LIN. *Le Corbeau*, BUR. *Der Gemeine Rabe oder Kolkraube*, BECH.

Description and Observations.—This and the three following species are not aviary birds, in the proper sense of the word ; but as they may be taught to speak, and are often reared from the nest with that view, they claim, for completeness' sake, a notice in this place.

The Raven is a well-known bird ; it is two feet in length, of which the somewhat cone-formed tail measures eight inches and three-quarters. The whole bird is black, tinged on the



upper part of the body with violet ; on the lower part, on the pen feathers, and on the tail, with green ; the black of the throat is somewhat paler.

Of all Corvine birds, which are distinguished by a high, round, knife-shaped beak, provided at the base with bristles which incline forward, the Raven, on account of its broad tongue, may with least difficulty be taught to speak. In Thuringia, the traveller, on entering an inn, is frequently saluted by the appellations, "*thief, rascal,*" uttered by one of these birds, confined, probably, in a large cage like a tower. They may also be allowed to run at large, or even to fly about, when they have been tamed while young, as is necessary if they are to be taught to speak. In this case they will, when called to their meals, answer to a name. All shining metal, especially gold, must be put out of their way ; as, like other birds of the same species, they have a particular inclination to steal. It is said, that a Raven was trained to salute Augustus after a victory, with the words *Ave Cæsar, Victor, Imperator ! Hail Cæsar, Conqueror, Emperor!*

Some persons, with a view to facilitate the utterance of articulate sounds, are accustomed to cut what is called the string of the tongue, an operation which certainly attains its end in some measure, though I have heard Ravens speak, on which it had not been performed.

At the time when divination made a part of religion, this bird was held in great estimation. All its actions, every circumstance of its flight, every modulation of its voice, were carefully studied. Of these modulations no fewer than sixty-four have been enumerated, without reckoning minor shades of difference, a discrimination which must have required an exceedingly fine ear, as the Raven's cry—*Koack, kroack*—is apparently very simple. Every modulation had its specific signification, and there was no lack of impostors to profess, or of dupes to believe, these ridiculous fancies. Some, indeed, proceeded to so great a pitch of credulity, as to eat the heart and entrails of the Raven, in hopes of thereby acquiring its prophetic faculty.

The Raven is generally met with in woody districts, and builds its nest on the highest trees ; it lays from three to five dirty green eggs, spotted with olive brown. The young, if to be tamed, must be taken when half fledged, or about twelve days old, and

fed with meat, snails, and earth-worms ; they will also eat bread soaked in milk, and after awhile, bread, meat, or any scraps from the kitchen. In a state of nature, they subsist on leverets, birds' eggs, mice, goslings, chickens, snails, pears, cherries, &c., so that their usefulness to the farmer is not without drawbacks.

ADDITIONAL.—The general appearance and habits in a domesticated state of this bird are so well known, that we need scarcely add anything to the account which BECHSTEIN gives of it. MUDIE has drawn a graphic and vivid picture of its characteristic traits as a bird of the wilderness.*

Except in a domesticated state, opportunities of observing the habits of the Raven are comparatively rare, for the bird generally shuns the habitations of man, and seeks the solitude and seclusion of wild and mountainous districts ; no where is it more plentiful, perhaps, than amid the rocks and about the sounding shores of the Scottish isles, where putrescent animal food is likely to be most abundant. In the Hebrides, and along the north coast of Scotland, MACGILLIVRAY describes these birds as being numerous ; he also says that they are common in the shires of Dumfries and Peebles, and about the head of Moffatwater, where they often breed. “In the wilds of Polmoody, in the face of tremendous linns and rocks, there juts out a dwarfish birch or mountain-ash ; the same cleft has borne a Raven’s nest for centuries, where no human creature can get at it.” SHUCKHARD, who states that he had ample opportunities of cultivating an acquaintance with this species in the outer Hebrides, gives a lengthened description of its characteristics, which, however, agrees so closely with what MUDIE has said on the subject, that we need not quote more than the following observations. “The Raven sometimes nestles at no great distance from the Eagle, in which cases these birds do not molest each other ; but in general the former is a determined enemy to the latter, and may often be seen harassing it. ‘What a brave soldier the Raven is !’ he fights the Eagle, who is four times his size,’ I remember hearing an old highlander say to me more than twenty years ago. But let us consider the matter.

“There goes the White-tailed Eagle ! Launched from the rock of Liuir, she advances along the cliffs on her way to the inland hills, where she expects to find a supply of food for her young. Now she is opposite the promontory of Ui, whence, croaking in fierce anger, rush two Ravens. The Eagle seems not to heed them : but they rapidly gain upon her, and separating as they

* See “Feathered Tribes of the British Islands,” 2 vols. Bohn.

come up in her wake, one ascends, the other glides beneath, menacing her and attempting to peck her. While she regards the one below, that above plunges toward her; but perceiving that she is ready to meet him, he reascends a few feet, the other in the mean time threatening vengeance below. I never observed, however, that they actually came in contact with the object of their pursuit, which seemed to regard them as more disagreeable than dangerous, and appeared to hurry on, merely to avoid being pestered by them."

GILBERT WHITE, we remember, speaks of "a very exact observer," who "has often remarked that a pair of Ravens nestling in the rock of Gibraltar, would suffer no Vulture nor Eagle to rest near their station, but would drive them from the hill with an amazing fury." This, however, was during the period of parental care and solicitude, when the weakest and naturally most timid of creatures become bold and pugnacious. This author relates an interesting anecdote, which may serve in some measure to relieve the dark tints which are necessarily used in depicting the character of this bird:—

"In the centre of the grove there stood an oak, which, though shapely and tall on the whole, bulged out into a large excrescence about the middle of the stem. On this a pair of Ravens had fixed their residence for such a series of years, that the oak was distinguished by the title of the Raven Tree. Many were the attempts of the neighbouring youths to get at this eyry: the difficulty whetted their inclination, and each was ambitious of surmounting the arduous task. But when they arrived at the swelling, it jutted out so in their way, and was so far beyond their grasp, that the most daring lads were awed, and acknowledged the undertaking to be too hazardous. So the Ravens built on, nest upon nest, in perfect security, till the fatal day arrived in which the wood was to be levelled. It was in the month of February, when those birds usually sit. The saw was applied to the butt, the wedges were inserted into the opening, the woods echoed to the heavy blows of the beetle, or mallet, the tree nodded to its fall; but still the dam sat on. At last, when it gave way, the bird was flung from her nest; and, though her parental affection deserved a better fate, was whipped down by the twigs, which brought her dead to the ground."

KNOX, in his *Ornithological Rambles in Sussex*, gives a long and most interesting account of a pair of Ravens, whose motions and operations he seems to have watched very narrowly. He says, speaking of Petworth Park, after describing the untimely fate of one pair of birds which had built in that locality, and which were destroyed by an ignorant keeper:—"Years passed away, and the Raven continued unknown in this part of West

Sussex, until one day in March, 1843, when, riding in the park near a clump of tall old beech trees, whose trunks had been denuded by time of all their lower branches, my attention was suddenly arrested by the never-to-be-mistaken croak of a Raven, and the loud chattering of a flock of Jackdaws.

"I soon perceived that these were the especial objects of his hatred and hostility; for after dashing into the midst of them, and executing several rapid movements in the air, he succeeded in effectually driving them to a considerable distance from his nest. During this manœuvre, the superior size of the Raven became more apparent than when viewed alone, and his power of flight was advantageously exhibited by comparison with that of his smaller congener. The latter, indeed, seemed to bear about the same relation to him, in point of size, that Starlings do to Rooks, when seen together. The Raven's nest was placed on a fork, in the very summit of one of the highest of these trees, while their hollow trunks were tenanted by a numerous colony of Jackdaws. Some of the holes through which these entered were so near the ground, that I had no difficulty in reaching them when on horseback, while others were situated at a much greater height. These conducted to the chambers in which the nests were placed, and which were generally far removed from the external aperture, by which the birds entered their tower-like habitation. On thrusting my whip upwards into many of these passages, I found it impossible to touch the further extremity, while a few cavities of smaller dimensions were within reach of my hand, and contained nests, constructed of short, dry sticks, some of which were incomplete, while in others one or two eggs had been deposited. The next day I returned to the place on foot, provided with a spyglass, for the purpose of observation. On my arrival, I found that the Ravens were absent, and that the Jackdaws, availing themselves of this, had congregated in considerable numbers, and were as busily employed about their habitations as a swarm of bees; some carrying materials for the completion of their frail and yet unfinished nests, others conveying food to their mates, and all apparently making the most of their time, during the absence of their tormentors. There being no cover or brushwood at hand, and the branches being yet leafless, I was unable to conceal myself effectually; but having sat down at the foot of the tree containing their nest, I awaited the return of the Ravens. Nearly an hour elapsed before the return of the male bird, and I was first made aware of his approach by the consternation it appeared to spread among the Jackdaws. Like most animals under similar circumstances, when conscious of the approach of danger, they rapidly collected their forces on a single tree, keeping up all the time an incessant chattering, each

bird shifting its position rapidly from bough to bough, while the Raven, who held some food in his beak, satisfied himself on this occasion with two or three swoops into the terrified crowd, and having routed the mob, he approached the tree in which his nest was placed. Before arriving there, however, he evidently became aware of my presence, and dropping his prey, which proved to be a rat, he ascended into the air to a great height in circular gyrations, after the manner of a Falcon, where he was soon joined by his consort; and the two birds continued to soar over my head while I remained there, uttering not only their usual hoarse croak, but also an extraordinary sound, resembling the exclamation, ‘Oh!’ loudly and clearly ejaculated. At first I could hardly persuade myself that it proceeded from the throat of either of the Ravens, but my doubt was soon dispelled, for there was no human being within sight; and after carefully examining one of the birds for some time with my glass, I observed that each note was preceded by an opening of the beak, the distance, of course, preventing sight and sound from being exactly simultaneous.”

We cannot follow Mr. KNOX verbatim through the whole of his interesting narrative, but must give the remainder of it in a more condensed form. The following year, then, it appears, the pair of birds changed their retreat from the beech grove to a clump of Scotch firs in the same part, where their nest was invaded by a truant school-boy, who bore away in his satchel the four “squabs” which it contained. The watchful naturalist discovered the loss of the parent birds, and after awhile traced out the depredator, and got possession of the fledgelings in a half-starved state; these it was determined to bring up by hand; and the operation of clipping was already performed upon three of them, when the idea occurred that the restoration of the remaining perfect bird to the nest might have the effect of attracting the old ones back to their now deserted, because empty home. The experiment was tried and proved successful, and, in the words of the pleased narrator, “the young bird was safely reared; the Ravens have since brought up several families in the same nest.”

There is perhaps no bird more widely distributed over the surface of the globe than the Raven, which it has been well said by the writer last quoted, “croaks as gravely as with ourselves on the shores of the Black and Caspian seas, visits our Indian metropolis of Calcutta, forces its way over the guarded shores of Japan, dwells among our busy descendants in America, ranges from Mount Etna to the Iceland cold of Hecla, and braves the rigour of the Arctic regions as far as Melville’s Island.” CAPTAIN ROSS speaks of it as “one of the few birds capable of braving the severity of an arctic winter;” and DR. RICHARDSON says that “it frequents the barren grounds of the most intense winter cold, its

movements being directed in a great measure by those of the herds of rein-deer, musk-oxen, and bisons, which it follows, ready to assist in devouring such as are killed by beasts of prey, or by accident. No sooner has a hunter slaughtered an animal than these birds are seen coming from various quarters to feast on the offal ; and considerable numbers constantly attend the fishing stations, where they show equal boldness and rapacity." In allusion to the power which this bird possesses of imitating the human voice, the author last quoted relates an instance of one he knew at Chatham, which, living in the vicinity of the guard-house, "more than once turned out the guard, who thought they were called by the sentinel on duty."

According to AUDUBON, in the United States "the Raven is in some degree a migratory bird, individuals retiring to the extreme south during severe winters, but returning to the middle, the western, and southern districts at the first indications of milder weather."

WILSON characterises as "mere fable" the account given by BUFFON, who says—"The Raven plucks out the eyes of buffaloes, and then fixing on the back, it tears off the flesh deliberately ; and, what renders the ferocity more detestable, it is not incited by the cravings of hunger, but by the appetite for carnage ; for it can subsist on fruits, seed of all kinds, and, indeed, may be considered to be an omnivorous animal."

GILBERT WHITE has noticed a peculiarity in the habits of the Raven, which he says "must draw the attention of even the most incurious," although we do not recollect to have seen it alluded to elsewhere. "They spend their leisure time in striking and cuffing each other on the wing in a kind of playful skirmish ; and when they move from one place to another, frequently turn on their backs with a loud croak, and seem to be falling to the ground. When this odd gesture betides them they are scratching themselves with one foot, and thus lose the centre of gravity." Much more might be written about this grave, and, in the eyes of many, even of the present day, preternaturally cunning bird, the feathered soothsayer of the Greeks and Romans, the oracular voice of the future to the Scandinavian nations, the harbinger of evil and of death, the bird of night and of witchcraft, the grim watcher by the gibbet, where swing the bones of the murderer, that amid the pauses of the night wind, as it howls and whistles over the lonely moor, croaks ominous, and, as MALONE says in *The Jew of Malta*,—

"Doth shake contagion from his sable wings."

9. THE CARRION CROW.

Corvus Corone, LIN. *Corneille*, BUF. *Die Raben krähe*, BECH.

Description.—This bird resembles the preceding in almost every particular, except that it is smaller, being only one and a half feet long, and has not a conical, but a rounded tail. The whole plumage is black, with a tinge of violet on the lower part of the body.

Observations.—In many parts of Germany this is a very common bird, so that in groves which it frequents, more than one nest is often built upon the same tree. The female lays four to six green eggs, spotted with grey and brown. In places where they do not migrate, but remain the whole year, young birds have been taken as early as March, and successfully reared. They are to be treated like the foregoing, and are even easier to tame. I know cases in which old birds have been taught to come and go; and even wild birds, which having been fed in the farm yard throughout the winter, have flown away at the beginning of spring, and bred, yet, at a fixed time in the autumn, have returned to be fed, and become as tame as barn-door fowls.

Their food in a wild state consists of insects, worms, mice, grain, and different kinds of fruit.

In winter they may be easily caught in towns and villages by paper cones, under which a piece of meat is placed, and whose edges are smeared with bird lime. They may also be taken on limed twigs placed in the yard or near the house, to which they will be attracted by scattered grain or dung.

ADDITIONAL.—Its partiality for animal diet in a putrid state, has obtained for this bird the name Carrion Crow, by which it is generally distinguished; it is also sometimes called the Flesh Crow, and the Gor, or Gore Crow, as well as the Black Crow, the Corby Crow, and the Hoody Bran. In many of its habits and characteristics it closely resembles the Raven, being a bold, mischievous, predatory bird, with which man, and especially the agriculturist, is continually at war. And were it not for its extreme caution and sagacity, there is reason to believe, so numerous and persevering are its foes, that the species must have long since become extinct, or, at all events, have been driven out of the more highly cultivated parts of the country. On the contrary, however, we find that it is precisely in these parts that these black-coated depredators do most thickly congregate. Year

after year, notwithstanding the gun and the snare, and the scarecrow, and the rewards offered for their destruction, swarming they alight upon the rich corn lands, when the seed is newly deposited in the earth, or just as the green blade begins to peep above the surface ; and the unlucky farmer sees his hopes of an abundant harvest frustrated by this feathered marauder, who, as WILSON says, " hovers over the fields of the industrious, fattening on their labours, and, by his voracity, often blasting their expectations."

It has been urged in defence of the Crow, that he is a great destroyer of worms, moles, mice, caterpillars, grubs, beetles, and such like agricultural pests, and perhaps if it were possible to calculate the amount of good which he effects in this way, and set it against a fair sum total of his mischievous workings, we should find that he is not so great an enemy to man after all ; as this, however, is impossible, we must be content to let the stigma rest upon his character, and to see him proscribed as a thief and a villainous depredator. Lawless, however, as may be their dealings with man, it seems that among themselves the crows have a code of laws which are somewhat strictly observed ; no less a penalty than death being sometimes inflicted on offenders against them. Here is an account of the holding of one of their courts of justice, taken from *Landt's Description of the Feroe Islands* :—

" Those extraordinary assemblages, which may be called Crow-courts, are observed here (in the Feroe Islands) as well as in the Scotch isles ; they collect in great numbers, as if they had been all summoned for the occasion. A few of the flock sit with drooping heads ; others seem as grave as if they were judges, and some are exceedingly active and noisy, like lawyers and witnesses : in the course of about half an hour the company generally disperse ; and it is not uncommon, after they have flown away, to find one or two left dead on the spot."

MUDIE says of these birds that they are not found in the Highlands and northern isles of Scotland : perhaps it would have been better to have said not commonly found there ; as their presence in the Feroe Isles would seem to indicate that they would, at least, occasionally visit the Hebrides, and other outlying parts of Scotland, as well as the northern coast. MULLER includes the *C. corone* among the birds of Denmark ; and M. NILSSON says it is found in Sweden, although rarely : in Norway and Iceland also it is sometimes seen. And now, turning our glance southward, we may mention that it is an inhabitant of Germany, France, Spain, Provence, and Italy, in which countries it inhabits the woods from spring to autumn, and the plains during the winter. According to TEMMINCK, it is found in the Morea,

and also in Japan ; while a Russian naturalist states that it inhabits the country south of the Caucasian range, between the Black and Caspian Seas. WILSON describes a Carrion Crow, which he says is identical with the European species, and tells us that it is generally distributed over the cultivated parts of North America. And, coming again to our own country, we may remark that the Irish naturalist, THOMPSON, informs us that it frequents the sea-coast of that country, chiefly through the northern parts. We believe that there are no English counties in which these birds are not found. Here is MUDIE's account of their habits :—

" They nestle in high trees, but they prefer the neighbourhood of rich countries, and hence they are not found in the Highlands. They prowl about, even to the doors of the houses, and into the poultry-yards, and are voracious devourers of eggs, young poultry, young rabbits, and young game, even more so than the regular birds of prey. They punch out the eyes of weak animals, hawk at birds on the wing, open-shelled mollusca on the sea-shore ; and there are modern instances in corroboration of the story of the ancient philosopher who was killed by a crow mistaking his head for a stone, and dropping an oyster on it in order to break the shell. One of these was seen by the celebrated WATT. A crow caught up a crab, rose with it to a considerable height, dropped it, not on the head of a modern philosopher—or he might not have come more safely off than the ancient one—but on a stone, and descended to her feast.

" Though not a very long winged bird, the Carrion Crow rises to a considerable height, higher than that at which the Hooded Crow is seen ; and in defence of her brood, she beats off the smaller Hawks, the Kite, and the Raven. The brood remain with the parent birds till next breeding time ; and though these Crows collect in small flocks during the winter, they seem to do so rather from an accidental meeting in quest of food, than from any principle or instinct of a social nature. During the breeding season, each pair keep within their own territory, which is of considerable extent, though at other times they associate during the night. When the spring begins to be felt, they separate : the Hooded Crows migrate, and the Rooks collect together. These are, at least, distinctions of habit."

WILSON gives some interesting particulars of the in-door habits of this bird. " The Crow is easily raised and domesticated ; and it is only when thus rendered unsuspecting of, and placed on terms of familiarity with man, that the true traits of his genius and native disposition fully develop themselves. In this state he soon learns to distinguish all the members of the family ; flies towards the gate, screaming, at the approach of a stranger ;

learns to open the door by alighting on the latch ; attends regularly at the stated hours of dinner and breakfast, which he appears punctually to recollect ; is extremely noisy and loquacious ; imitates the sound of various words pretty distinctly ; is a great thief and hoarder of curiosities—hiding in holes, corners, and crevices every loose article he can carry off, particularly small pieces of metal, corn, bread, and food of all kinds ; is fond of the society of his master, and will know him even after a long absence, of which the following is a remarkable instance, and may be relied on as a fact : A very worthy gentleman, now (1811) living in the Gennesee country, but who, at the time alluded to, resided on the Delaware, a few miles below Easton, had raised a Crow, with whose tricks and society he used frequently to amuse himself. This Crow lived long in the family ; but at length disappeared, having, as was then supposed, been shot by some vagrant gunner, or destroyed by accident. About eleven months after this, as the gentleman, one morning, in company with several others, was standing on the river-shore, a number of Crows happening to pass by, one of them left the flock, and flying directly towards the company, alighted on the gentleman's shoulder, and began to gabble away with great volubility, as one long-absent friend naturally enough does on meeting with another. On recovering from his surprise, the gentleman instantly recognised his old acquaintance, and endeavoured, by several civil, but sly manœuvres, to lay hold of him ; but the Crow, not altogether relishing quite so much familiarity, having now had a taste of the sweets of liberty, cautiously eluded all his attempts ; and suddenly glancing his eye on his distant companions, mounted into the air after them, soon overtook and mingled with them, and was never afterwards seen to return."

We have said that the Crow is a bold and mischievous bird ; leverets and young rabbits are frequently destroyed by it, and sometimes even weak lambs : in the preserve and the dove-cote, and the poultry-yard, it at times does considerable mischief. YARRELL relates that "a Carrion Crow was observed to steal a young duck, which it pounced upon while in a pond, and carried it off in his bill. The Crow did not drop the duck in order to kill it, but laid it down on the ground, walking backwards and forwards, and treading upon it until it was dead." Another observer states, "That while looking at an old Sparrow enticing forth its young ones, a Crow pounced upon it, held it between its claws, and instantly tore it in pieces as would a bird of prey."

HARRISON AINSWORTH, in his *Rookwood*, gives a song of the Carrion Crow, so full of spirit and character, that we are disposed to quote it—

"The Carrion Crow is a sexton bold,
He raketh the dead from out the mould ;
He delveth the ground like a miser old,
Stealthily hiding his store of gold.

Caw ! caw !

The Carrion Crow hath a coat of black,
Silky and sleek like a priest's, on his back ;
Like a lawyer he grubbeth—no matter what way—
The fouler the offal the richer his prey.

*Caw ! caw ! the Carrion Crow !
Dig ! dig ! in the ground below !*

The Carrion Crow hath a dainty maw,
With savoury pickings he crammeth his craw ;
Kept meat from the gibbet it pleaseth his whim,
It never can hang too long for him.

Caw ! caw !

The Carrion Crow smelleth powder, 'tis said,
Like a soldier escheweth the taste of cold lead ;
No jester in mime hath more marvellous wit,
For wherever he lighteth he maketh a hit.

*Caw ! caw ! the Carrion Crow !
Dig ! dig ! in the ground below !"*

10. THE HOODED CROW.

Corvus Cornix, LIN. Corneille Mantelée, BUR. Die Nebelkrähe, BECH.

Description and Peculiarities.—In winter this bird is to be met with in almost all parts of Germany, but in summer only in the north ; when it breeds in woods and gardens near the open country. The female lays four to six eggs, of a bright green, streaked and spotted with brown. The bird is somewhat larger than the preceding, and is grey, except the head, throat, wings, and tail, which are black.

When young it speaks better than the preceding, and if taken when old is more easily tamed. It is treated in the same manner.

ADDITIONAL.—This species of the *Corvus* family, which is variously called the Grey Dun, Bunting, Heedy Royston, or Hooded Crow, the latter being its most common name—is, according to MACGILLIVRAY, very abundant in most parts of the northern and middle divisions of Scotland and its islands, but becomes rarer as we advance southwards. In many parts of England it is found only during winter. "Although somewhat more social than the Carrion Crow, or the Raven, it is not gregarious ; for, although four or five individuals may often be seen together, more than that number seldom convene unless when attracted by an

abundant supply of food. It derives its subsistence from carrion, dead fish, crabs, echini, mollusca, larvæ, grain, and other matters, it being fully as promiscuous a feeder as the Carrion Crow, or the Raven, although it certainly prefers fish and mollusca to large carcases, and very rarely feeds upon a stranded whale, or even a domestic animal. Young lambs are favourite delicacies, and in severe seasons, when summer in vain struggles with winter, sometimes affords abundant temporary supply. I am not, however, inclined to believe that the Hooded Crow often destroys these animals, nor that it ventures to attack sickly sheep. It never disputes a prize with the Raven, much less the Eagle, nor will it advance so near to a dog as the former of these birds, which it resembles in vigilance and cunning, but without showing equal boldness.

"Perhaps the most remarkable habit of the Hooded Crow, is one which most persons who have observed it, consider as indicative of the approach of rain, but which I have not found to have any connection with that phenomenon. In quiet, and more especially in dull close weather, one of them, perched on a stone or crag, continues to croak for a long time, being responded to at intervals by another that has taken a station at some distance. Its voice is not so loud or clear as that of the Carrion Crow, but resolves itself into a rather harsh sound, resembling the syllable *craa*, pronounced by a genuine Aberdonian. On ordinary occasions, its flight is peculiarly sedate, being performed by regularly timed slow beats; but, when necessary, it can be greatly accelerated, although it never equals in rapidity that of the Raven. It also walks in the same staid manner as the Carrion Crow and the Rook, and in general wears a grave aspect, demeaning itself so as if it were not disposed to indulge in unbecoming levity. It rarely molests other birds, nor is it often attacked by any."

According to SELBY, "in those districts of Scotland where these birds most abound (which appear to be on the western and northern parts of the main land, in the Scottish isles), there is no visible diminution of their numbers during the winter months;" and therefore it has been inferred that those which visit England are annual migrants from Sweden, Norway, and other north-eastern countries. They generally make their appearance at about the same time as the Woodcocks, "which birds," says YARRELL, "are known always to take advantage of a north-eastern breeze for their journey."

TEMMINCK relates, "that in the northern countries of Europe, where the *C. corone* is rare, a mixed breed is produced between it and the *C. cornix*." Many instances of this admixture of breeds are also quoted by YARRELL, but it does not appear whether this hybrid race of birds is capable of reproduction: probably

it is not. It seems likely that the passage which we have quoted from LANDT, in reference to the holding of "a Crow Court," may refer to these birds, and not to the Carrion Crow: for MUDIE speaks of their assembling in large numbers, as if for the purpose of some solemn inquisition, previous to their dispersion for the breeding season, and these meetings, he thinks, have reference to offices of love and gallantry; then it is that they choose their males, and settle their quarrels of rivalry, which sometimes have fatal terminations.

The author last quoted, also tells us, that "in the south the Hooded Crows usually appear in small flocks, and come not only to the corn-fields, but to the neighbourhood of villages, and even of towns, gather any garbage they can find, and play the scavenger in the kennels, and at the lay-stalls. On the sea-shore they are not uncommon, where they pick up dead fish and birds, or any sort of animal substance, no matter how decayed or putrid, that may have been left grounded by the tide. * * * *

"They also prowl about the preserves, warrens, and pastures, and if they find any animal in a disabled or weakly state, they punch out its eyes, and if they are not able to kill it on the spot, leave it to perish, and return to the carrion at their leisure. In the north they carry on similar depredations during the whole summer. The number of eggs and young birds of Grouse and other species which they destroy, is very great, and in some places of the Highlands, and the northern isles, especially in the Feroe Islands, they rob the ground of the seed corn and the potatoes."

11. THE ROOK.

Corvus Frugilegus, LIN. *Le Freux ou la Frayonne*, BUF. *Die Saal-terähe*, BECH.

Although no notice of the Rook occurs in the work which forms the basis of the present volume, yet is it a bird whose associations with man and his labours are so intimate and well known, that we cannot well omit giving some account of its habits and characteristics. To the British naturalist there is perhaps no more interesting and important member of the *corvus* tribe than this; certainly none that has attracted a greater share of attention. It is described by MACGILLIVRAY as having the "feathers of the fore part of the head and throat abraded, plumage black, splendid, with purple, blue and green reflections; that of the neck blended, silky, steel-blue, purple and green; the bill attenuated towards the tip. Young, with the head entirely feathered, the plumage black, less glossy. The

nest is large, composed of sticks, and lined with fibrous roots, long straws, wool, and other substances. The eggs are four or five in number, an inch and ten-twelfths long, an inch and a quarter broad, colour light greenish blue, blotched, clouded, spotted, dotted, or freckled, with greyish and greenish brown, and light purplish grey.

ADDITIONAL.—PENNANT informs us that the Rook, or Bare-faced Crow, as it is sometimes called, is the *Cervus* of VIRGIL, being the only species of this family of birds which is strictly gregarious, and which therefore answers the description of the Latin poet, who very naturally describes their evening return to their nests, when

“rustling on the wing,
From their wide plumes the Rooks thick darkness fling.”

“Rooks,” says MUDIE, “have a history which is neither brief nor void of interest; and they are so numerous, and found in so many places, that any one may study it.” As no one has related that history in a more lively and graphic way than this author himself, we cannot do better than refer our readers to his interesting work on the *Feathered Tribes of Britain*, before alluded to.

The Rook is a social bird; he builds his nest very commonly in the immediate vicinity of human habitations; he is often to be found surrounded by his cawing progeny in the very midst of crowded cities. YARRELL tells us that “In the spring of 1838, a pair of Rooks began to form a nest in the crown which surrounds the vane of St. Olave’s church, in Hart Street, Crutched Friars; and many persons remember the nest built in a single and not very lofty tree near the corner of Wood Street, Cheapside. A few years since, a pair built their nest between the wings of the dragon of Bow Church; and in the gardens of two noblemen in Curzon Street, May Fair, a considerable number of Rooks have built for many years, and these probably received an addition at the destruction of the rookery in the gardens of Carlton House.” We have it on the authority of MR. BLACKWELL, a contributor to the *Zoological Journal*, that some low Italian poplars, in a central part of the town of Manchester, were for awhile the chosen breeding-place of three pairs of these birds; and on that of BEWICK, that a nest built by a pair of Rooks on the top of the vane of the Exchange, in Newcastle-upon-Tyne, was tenanted for ten successive seasons, although turned about with every wind that blew. MACGILLIVRAY also mentions that Rooks build every year in the heart of the city of Edinburgh. LEIGH HUNT, in his *Indicator*, thus pleasantly alludes to the Rooks of the Temple Gardens. “From Woodcote Green, a

pretty sequestered spot between Ashted Park and the town of Epsom, Rooks are said to have been first taken to the Temple Gardens by Sir William Northey, secretary to Queen Anne. How heightened is the pleasure given you by the contemplation of a beautiful spot, when you think it has been the means of conferring a good elsewhere. I would rather live near a rookery, which had sent out a dozen colonies, than have the solitary idea of them complete. In solitude you crave after human good; and here a piece of it, however cheap in the eyes of the scornful, has been conferred; for Sir William's colony flourishes, it seems, in the smoke of London. Rooks always appeared to me the clergymen among birds; grave, black-coated, sententious; with an eye to a snug sylvan abode, and plenty of tithes. Their clerical character is now mixed up in my imagination with something of the lawyer. They and the lawyers' 'studious bowers,' as Spenser calls the Temple, appear to suit one another. Did you ever notice, by the way, what a soft and pleasant sound there is in the voices of the *young rooks*—a sort of kindly chuckle, like that of an infant being fed?" It has been, and is, a much-disputed question, whether Rooks are most beneficial or hurtful to man. WATERTON appears to think the balance as about equal: KNAPP, that it inclines very much in favour of the birds, as does also JESSE, who cites several instances in which they have effected good upon a most extensive scale. "An extensive experiment," he tells us, "appears to have been made in some of the agricultural districts on the continent, the result of which has been the opinion that farmers do wrong in destroying Rooks, Jays, Sparrows, and indeed, birds in general. In our own country, in some very large farms in Devonshire, the proprietors determined, a few summers ago, to try the result of offering a great reward for the heads of Rooks; but the issue proved destructive to the farmers, for nearly the whole of the crops failed for three successive years, and they have since been forced to import Rooks and other birds to restock their farms with." "A similar experiment," says YARRELL, "was made a few years ago in a northern county, in reference to Rooks, and with no better success; the farmers were obliged to reinstate the Rooks, to save their crops."

MACGILLIVRAY has noticed that a great variety of notes are uttered by the Rooks under different circumstances; and that so far from their cry being always merely a *khra*, as is generally supposed, their voice is capable of great modifications. Their imitative powers, too, are very considerable. Mr. WEIR, a correspondent of the above-named naturalist, mentions one kept by an old woman at Bathgate, which imitated so well the barking of a dog, that if placed out of view, it was impossible to detect the deception. HEWITSON speaks of a Rook which imitated the note

of the Jackdaw. Many instances are on record, which go to prove that this bird possesses a large share of that peculiar sagacity which distinguishes several other individuals of the Crow tribe; two very amusing ones are mentioned by THOMPSON, in his *Note Book of a Naturalist*, which we think it well to quote: he says, "I often witnessed the drolleries of a Rook belonging to the Ship Inn, at Faversham, which was much frequented by commercial travellers, whose chaises, if their stay was a brief one, were allowed to remain in the yard. The Rook, in a listless manner, and as if he had no object in view, would hop about one, and at last disappear under the driving seat. In a short time the horse was put to, and the traveller drove on to the next stage, when the Rook issued from his concealment, and by the most impressive croaks signified his delight at his escapade. This was of constant occurrence, and the landlord assured me that these jaunts cost him many shillings for the back carriage. Another bird, on the same road, either at Dartford or Welling, was in the habit of accompanying a coach which changed horses at his master's house on its way to London, till it met the down coach, when it transferred itself to that vehicle and returned home."

Over part of the European continent the Rook is said to be a migratory bird; it is sometimes observed to cross the Channel from this country, although it is not found in Guernsey or Jersey, nor in the Shetland nor Orkney Isles. It inhabits the range of country between the Black and Caspian Seas, and also, according to TEMMINCK, is a dweller in Japan.

12. THE JACKDAW.

Corvus Monedula, LIN. *Chouca*, BUF. *Die Dohle*, BECH.

Description and Observations.—This bird, from the circumstance of making its nest in old buildings and ruins of every description, is naturally half tame; and becomes entirely so, if reared by hand. In that case it may be allowed to run about the yard with the poultry. The nest generally contains from four to seven green eggs, spotted with dark brown and black. The Jackdaw is prized by amateurs, not so much on account of its speaking powers, which are not very great, as of its tameness and recognition of its owner. It often becomes so familiar as to accompany its possessor in his walks, and so attentive, as to notice all that passes in a house—especially in the culinary department. Even old birds may be taught to obey a call, if their wings be cut in autumn, and again in spring, so that they only gradually recover the power of flight. In this case, the bird will certainly return to the yard at the ap-

proach of winter. The Jackdaw is about the size of a Pigeon, being thirteen inches and a half in length. The back of the head is light grey ; the rest of the body black, rather paler on the belly than elsewhere.

When in winter it eats wild garlic in the fields, it preserves the offensive smell for a long time, even in the house.

ADDITIONAL.—In many of its habits and characteristics, this bird very closely resembles the Rook ; he is a pert, lively, and loquacious fellow, fond of the company of his feathered congeners, and also of human society ; he is more compact of form and lively in his actions than any other bird of the genus *Corvinae*, of which he is the smallest member, though not by any means the least important, if his own estimate is to be taken,—that is, judging of this by his consequential airs, and tokens of self-satisfied importance. He is a handsome bird, too, with his black head and wing coverts glossed with blue and violet reflections, running off into grey as if a smoke wreath were floating over, and partly hiding the rich dark shades of his plumage. The following is MUDIE's account of some of his distinguishing peculiarities : “ Holes and chinks are the immediate places in which Jackdaws nestle ; but these must be elevated above the level of the ground, and the higher they are the bird likes them the better. It is probable that the original instinct is the protection of its eggs and young from the weasels. Rocks, the edges of neglected quarries, the projecting parapets of bridges, towers, steeples, ruins, the earth where it forms a very steep and crumbling bank, are all resorted to by the Jackdaws ; and one would imagine that the birds are fonder of the society of man than of having the locality to themselves. But the fact is, that these birds court the vicinity of human dwellings for the same reason as the House-Swallows, because insects are most abundant there. Fifty towers may be built in an insectless wilderness, and never a Jackdaw would come to nestle in them.

“ In the winter months, the Jackdaws and Rooks flock together, and collect their food on the same fields, and of the same kind, without any hostility ; but in the spring, when the Rooks return to the rookery or the trees, the Jackdaws collect about the rocks and towers. Their habits are, indeed, very similar to those of the Rooks, with the exception of the places in which they nestle, and the materials of the nest ; both are generally of sticks, but the Jackdaw uses a lining of softer matters. The difference of their notes easily distinguishes the two species, even when they are so blended and distant that the eye cannot. The Scotch names, *Craa* and *Kae*, are, perhaps, as expressive of their sounds as names can well be.

"In some places, one would think that there is more in their winter associating than merely accidental meeting on the same pastures. In the latter part of the season, when the Rooks from one of the most extensive rookeries in Britain made daily excursions of about six miles to the warm grounds by the sea-side, and in their flight passed over a deep ravine in the rocky sides, or rather side (for they inhabit the sunny one), on which there were many Jackdaws, I have observed that when the cawing of the Rocks in their morning flight was heard at the ravine, the Jackdaws, which had previously been still and quiet, instantly raised their shriller notes, and flew out to join the Rooks, both parties clamouring loudly, as if welcoming each other ; and that, on the return, the time of which was no bad augury of the weather of the succeeding day, the Daws accompanied the Rooks a little past the ravine ; then both cawed their farewell, and departed. What is more singular, I have seen, too frequently for its being merely accidental, a Daw return for a short time to the Rooks, a Rook to the Daws, or one from each race meet between, and be noisy together for a space after the bands had separated. With the reason I do not interfere, not being in the secrets of either party ; but the fact is as certain as it is curious. In order that any one who pleases may investigate the matter, I may mention that the Rooks were from the woods of Panmure, the Daws from the den of Pitairley, and the feeding ground was the low part of the parishes of Monifeith and Barry, all in the county of Angus.

"From the ease with which Jackdaws can be observed, there are many stories of them, and also of the perils to which boys expose themselves in plundering their nests. One of the most extraordinary of the latter, is that of Murray, the Dundee barber. The battlement of the old tower there is about one hundred and fifty feet above the pavement at the base. Murray (when a boy) went through one of the holes in the parapet, hung by one hand to a Scotch bonnet, which another boy held from within, and with his other hand drew the eggs and young birds from the nests, and put them in the bonnet. While thus employed, he kept warning his companion, 'If you let go the bonnet, I'll give you none of the spoil.' The Jackdaw is easily tamed, and long remembers those who have paid attention to it ; indeed, it is almost tame in its natural state ; but it is noisy and impudent, and not very honest."

To this we may well add an extract from the account given by MACGILLIVRAY in his *History of British Birds*.

"Jackdaws inhabit deserted buildings, steeples, towers, and high rocks, especially those along the coast. Sallying from thence at early dawn, they betake themselves to the pastures, meadows,

or ploughed fields, to search for larvæ, worms, insects, and in general the same sort of food as the Rooks, with which they often associate on their excursions. They walk gracefully, and much more smartly than the Rooks, often running under excitement, and frequently quarrelling together, although without any serious results. They do not despise carrion, and on the shore will occasionally feed on shell-fish, crustacea, and fishes, being nearly as omnivorous as the Hooded Crows, although giving a decided preference to larvæ. They are scarcely less vigilant than the Rooks, at least while in the fields, so that it is not always easy to get within shot of them; but in the breeding season one may readily procure specimens by concealing himself in the midst of their haunts.

"This is one of the few birds that habitually or occasionally reside in the heart of cities, where it selects a steeple, a church tower, or any other high building in which it can find a sufficient number of secure retreats. In Edinburgh, for example, it frequents Heriot's and Watson's hospitals, the University, the Infirmary, the chapel of Holyrood House, and the Castle, although in the latter it is chiefly in the rock that it takes up its abode. In the country, ruinous castles are its favourite places of resort, and it is found, for example, at Dunottar, Rosslyn, and Tantallon castles, and the buildings on the Bass. It also not unfrequently finds refuge in high rocks, as at the Cove, near Aberdeen, and in other places along the coast; and in defect of more agreeable lodgings, will sometimes settle in a wood.

"In these places also it nestles, as well as not unfrequently in the interior of chimneys in which fire is not kept. The nest is fixed in any convenient recess, in a cornice, or other projecting part of a building, in the hole of a spout, or, in short, in any place that seems suitable. It has a base-work of sticks, on which is laid a quantity of straw, wool, feathers, and other soft materials. The eggs are from four to seven, generally five, of a regular oval form, broader in proportion to their length than those of the other species, much lighter also, being of a very pale greenish blue, or rather blueish white, covered, more profusely at the larger end, with small, round, separated spots of dark brown and pale purplish. They vary in length from an inch and four-twelfths to an inch and six-twelfths in diameter, from eleven and a half-twelfths to a twelfth more. The eggs are generally deposited in May, and the young are abroad by the end of June.

"Like the Wheatear, it has sometimes been found to nestle in a rabbit's hole. Thus, WHITE relates that a gentleman residing near Chichester informed him that 'that many Daws build every year in the rabbit burrows under ground. The way he and his brothers used to take their nests while they were boys, was by

listening at the mouths of the holes, and if they heard the young ones cry, they twisted the nest out with a forked stick.' 'Another very unlikely spot,' he adds, 'is made use of by Daws as a place to breed in, and that is Stonehenge. These birds deposit their nests in the interstices between the upright and the impost stones of that amazing work of antiquity; which circumstance alone speaks the prodigious height of the upright stones, that they should be tall enough to secure those nests from the annoyance of shepherd boys, who are always idling round that place.'

Much curious matter might be added respecting the situations in which the nests of the Jackdaws are sometimes built, and the substances of which they are composed, wool and other soft substances being used for the lining, and sticks loosely put together forming the exterior. Mr. J. DENSON relates, in the *Magazine of Natural History*, "that at Cambridge, where the Jackdaws are very numerous, they appropriated the wooden labels attached to the plants in the Botanic Gardens to the purposes of building to such an extent as to cause great perplexity and serious inconvenience; as many as eighteen dozen of these labels, which were principally of fir, and about nine inches long and one broad, were taken out of a single chimney shaft, in which the birds were in the habit of forming their nests." Of the extraordinary mass of materials sometimes collected by this bird, we have an instance quoted by YARRELL, from a letter addressed to him by C. ANDERSON, Esq., of Lea, near Gainsborough, who states, that a Jack-daw began its nest in the steep and narrow steps of a spiral stone staircase in Saunby Church, Lea, and finding that it could not get a base sufficiently flat and broad for its purpose, continued to pile up sticks to the height of five or six steps, until a landing was reached where the structure was finished off securely, if not very neatly. An instance, giving evidence of still greater perseverance and sagacity, not to say intelligence, on the part of the bird, is recorded by JESSE, in his *Scenes and Tales of Country Life*; this was in the bell tower or turret of the chapel of Eton College; and the most remarkable circumstance connected with it was, that the feathered architects having to bring the timber which they employed through a narrow aperture in the wall, broke, or cracked, each of them exactly in the middle, so that they could be doubled up, and thus drawn through more easily. In *The Dumfries Courier*, a few years back, it was related that a clump of trees in Cully Park, in which a flock of Daws had long built, having been completely wrecked by a fearful storm, the birds betook themselves, for the purposes of breeding, to some rabbit burrows close by, which henceforth had both furred and feathered inhabitants, who lived amicably together, and formed one "happy family." In BROWN's *Anecdotes* may



be found several, which strikingly exhibit this bird as one of great sagacity, but we have not space to quote them. WATERTON considers that when Jackdaws once pair they remain partners for life: they are found in most parts of this country, as well as in Holland, France, Germany, Italy, and on the northern shores of Africa; also in Denmark, Scandinavia, Russia, Western Siberia, and even Iceland. Specimens have been found in Smyrna and Trebizond, and most of the countries between the Black and the Caspian Seas; but neither in India proper nor throughout the continent of America. This bird is happily characterized in a poem by VINCENT BOURNE, well rendered by Cowper. We have only space for the first verse:—

“There is a bird who by his coat,
And by the hoarseness of his note,
Might be supposed a crow;
A great frequenter of the church,
Where, bishop-like, he finds a perch,
And dormitory too.”

13. THE JAY.

Corvus Glandarius, LIN. Le Geai, BUF. Der Holzheher, BECH.

Description.—This is a beautiful bird, which in my youth I have often seen among the peasants of the Thuringian forest, confined in a cage and taught to speak. It is thirteen inches and a half long, and about the size of a Pigeon; its beak is black, and resembles that of a Crow; the feet are brown and somewhat inclining to flesh colour; all its smaller feathers are soft and silky; almost the whole body may be described as tinged with purple ashen grey; the throat is whitish; the eyes reddish white; the vent and rump quite white; the large loose feathers on the top of the head can be erected into a black grey and purple crest; on each side of the head a black stripe runs from the lower mandible almost half way down the neck; the pen feathers are blackish, the centre ones having a white border, which produces a spot of the same colour on the wings. The larger coverts are crossed on the outer side by bright narrow stripes of whitish blue, light blue, and bluish black, the colours of which blend together like those of the rainbow, and add much to the beauty of the bird; the tail feathers are black, but grey at the roots, and towards the point marked by transverse bands like those just described. The female is only distinguishable from the male by having on the back of the neck a greyish, in place of a reddish tinge.

Habitat.—The Jay is found in forests, both in mountainous and level countries; but especially in woods where coniferous are mixed with other trees. In the house it must be confined in a large wire cage, to which the shape of a tower or any other may be given at pleasure.

Food.—In a wild state it lives on acorns and beech mast, and when these fail, on various insects, worms, and berries. It is very destructive in the cherry orchard. In confinement it soon becomes accustomed to bran soaked in milk, but will eat also bread, curds, meat, and anything that comes to table. It is particularly fond of acorns and nuts. It must be kept very clean, as it is apt to dirty its feathers and spoil its appearance. The best food for it is, however, wheat alone, as in this case its excrements are neither so soft, nor so foetid, as otherwise; on this diet it will live many years. It requires an abundant supply of fresh water both for drinking and bathing.

Breeding.—The Jay builds its nest in beeches, oaks, and fir trees, and lays six or seven ashen grey eggs, covered with small dark brown spots. If the young birds are to be taught to speak, they should be taken from the nest when fourteen days old, and fed with curds, bread, meat, &c. They are easily reared and domesticated. The old birds are very difficult to tame; they conceal themselves at the sight of any one, and will sooner fast the whole day than reappear.

Mode of Taking.—Whoever wishes to catch old birds, will find the following method the best:—In autumn, choose, in a spot frequented by these birds, a fir or pine, which stands five or six paces from any other tree; cut from this all the superfluous branches, leaving only sufficient to form a sort of ladder, and dock these to the length of two, to two and a half feet; let these branches, which should extend from about ten feet from the ground, to six feet from the summit of the tree, be covered with limed twigs; under the tree a small hut lightly roofed with brushwood is to be built, capable of holding as many persons as are desirous to share in the sport. On this is placed a living or dead Owl, or an Owl made of clay, or even a hareskin will do, so that it is attached to a string by which it can be moved. To attract the Jays, a wooden whistle is necessary, having a bit of cherry-tree rind inserted in the notch, and covered with another piece of the same—the cry of the Owl is thus imitated; the Jays, its enemies, flock together

and utter their cries. The alternate cry of Owl and Jay brings more; they fly on to the lime twigs, fall down, and are carried by the weight through the roof of the hut. Other birds are often attracted in this manner, and come to the rescue of the Jays; and Jays, Magpies, Woodpeckers, Redbreasts, and Thrushes, are frequently caught at once. This mode of bird-catching may be practised either at day-break or in the twilight. They are also caught without difficulty in the water-trap—by which means young birds, with half-grown tails, may be obtained in July. These are not too old to be tamed and taught to speak.

Attractive Qualities.—The docility of the Jay is, as before said, its chief recommendation. It may easily be taught to speak, especially if the tongue-string be cut, though not more than unconnected words; it learns also to imitate little airs on the trumpet, as well as the songs of several other birds. Its beauty is to many amateurs a sufficient recommendation, but it may also be taught to come and go at command—though this does not succeed, as with the other Corvine birds, in the town, but only in the vicinity of fields and woods.

ADDITIONAL.—The Common Jay, Blue-winged Jay, Jay Pie, and Jay Pyet, are the names by which we distinguish this handsome bird, which is pretty generally distributed throughout the wooded parts of England, Ireland, and Scotland. MUDIE very justly describes it as one of the most beautiful of our resident birds, and says that “it is not one of which it is easy to get a sight upon compulsion, as the more you follow it, it plunges the deeper into the thick of the coppice. The best place for observing it well, is where there are peas or cherries near its haunts, as it feeds greedily upon these, and may then be watched for a longer time than its wary habits will admit of under most circumstances.

“Jays do not flock, neither have they meetings similar to those of the Magpies, and some of those Crows that breed apart from each other; nor, though it has been observed in some instances, has it been fully established that the young remain with the old birds after they are fully fledged, and capable of finding their own food. That is rather against the general analogy of their natures, for they are much more predatory than the Magpies, although considerably smaller. They are equally, if not more, destructive of the eggs of small birds; they catch mice, and they occasionally pounce upon birds, and kill and devour them.

“One of their most remarkable qualities is the volubility of their sounds, and the readiness with which, when tamed, they can be made to articulate. Their alarm note, which they utter upon the

appearance of any thing that is dangerous, or even strange in their haunts, is peculiarly harsh ; but they have a love-note in the early part of the season, which is not only soft, but so low, and apparently cautious, that it seems whispering to their mates, as if to hide their affections and their labours from the other tenants of the grove. Even there they are very imitative, and though they do not attempt the songs of the warblers, they are very adroit at bleating, screaming, neighing, and, in short, imitating all the harsher sounds. What purpose these may answer, whether to scare or invite, or mislead other birds, is not known. The soft note is, in the warmer parts of the country, often heard again toward the latter parts of the season, because there the Jays have often two broods in the year ; and it seems to be in such places only that the family keep together during winter.

"The first incubation is toward the end of May, the nest being begun about the first of that month. It is better built than that of the Rook, but less carefully lined than the Crow's, or generally than the Magpie's, and it has no walls **or** roof like the latter. The platform is of sticks, and the immediate receptacle for the eggs, which is shallow, is of grass and roots. The eggs are about the same in number as those of the Magpie ; the incubation lasts about two weeks, and the young acquire their plumage in July.

"The Jay is, for its size, remarkable for the rapacity of its appetite, and the wideness of its swallow, and eats acorns, nuts, and chestnuts entire ; but there are other substances of which it makes more of a *bonne bouche*. It is very partial to the flowers of the cruciferæ, which it pulls slowly and carefully, petal by petal. It is a restless and inquisitive bird, and sometimes gets itself torn or jammed between branches in its ramblings. When nests, and fruits on and under the trees fail it, it hunts among the fallen leaves, and often plunders the hoards of small quadrupeds ; but as it does not come far from the woods, even in the coldest weather, it must be subject to many casualties, which accounts for the limited numbers compared with the fecundity of the birds."

The Jay is widely distributed over the temperate portions of Europe, and is found in Spain, Provence, Italy, Malta, Barbary, and Egypt ; it is also common in the Morea, and in some parts of Greece. Its flesh, according to TEMMINCK, is frequently eaten. By a statute of 17th of George the Second, grand juries were empowered to offer threepence for the head of each Jay, because these birds were thought to do great injury to young trees, and this reward for its destruction had the effect of thinning the numbers considerably in this country. The harsh note of the bird has ever been one of its distinguishing characteristics. GISBORNE, in his *Walks in a Forest*, says—

"Proud of cerulean strains,
From heaven's unsullied arch purloined, the Jay
Screams hoarse."

14. THE NUTCRACKER.

Corvus Caryocatactes, LIN. *Casse noir*, BUF. *Der Tannenheher*, BECH.

Description.—This bird is about the size of the last mentioned, being twelve inches in length. Of this the tail, half of which is covered by the folded wings, measures four inches and three quarters. The beak is one inch and a half long, straight, compressed at the sides, and at the end curved, and black. The iris is nut-brown, the feet black, and one inch and three quarters in height. In general appearance it is speckled, like the Starling. The body is dark brown, lighter on the upper part; the head, neck, and rump, uniform in colour. There is a white spot in front of the eyes, and on the cheeks and sides of the neck a number of oval spots of the same colour. The spots on the back are larger, and may even be called stripes. On the breast the spots are frequent, large, and oval; on the belly less numerous, but larger still, and almost triangular. The upper tail coverts are black, the lower white; the wing coverts blackish, the lesser ones tipped with white. The pen and tail feathers are both black, the latter having white points.

The brown plumage of the female has a redder tinge than that of the male.

Habitat.—In a state of nature, this bird inhabits the thickest woods; especially if including coniferous as well as other trees, and being not far from meadows and springs. In October, it generally migrates to districts where acorns, beech-mast, and hazel-nuts are to be found; and in winter may be seen even on the roads, seeking for food among the horse-dung.

Food.—In a wild state the Nutcracker easily extracts the seeds from the fir-cones, and breaks open acorns and beech-mast, and cracks nuts by means of its strong bill. It eats also all kinds of berries, but prefers whatever animal food it can get, insects or otherwise.

In confinement, it may be treated and fed like the Jay; it is easier to tame, and sooner becomes accustomed to whatever food may be given it. It will eat grain, but prefers animal food; and if a live Jay were put into its cage, it would be killed and devoured in a quarter of an hour. It will even eat

squirrels which have been shot, a food from which the smaller birds of prey generally turn with disgust.

Breeding.—It builds its nest in hollow trees, and generally lays five or six eggs, of a dark olive grey, striped with dark brown. The young may be reared on meat.

Mode of Taking.—The Nutcracker may either be caught in the watertrap, or in autumn by a noose, baited with service berries, or better still, with hazel nuts.

Attractive Qualities.—Its movements are as amusing as those of the Shrike; it is as talkative as the Jay, and imitates the cries of many animals. Judging from its usual notes, and physical conformation, it might, if trained young, be taught to speak.

ADDITIONAL.—MUDIE's account of this bird is very succinct. He says that "it is an exceedingly rare straggler in Great Britain, though abundant in many parts of the continent, even the cold ones. It is about the size of a Magpie, of a rusty brown colour, palest on the sides of the head and neck: and is, especially on the scapulars, spotted with white, the spots larger and longer than those on the Starling. It lives on wild berries and kernels, and pips, the latter of which it digs out of their shells and cores with its powerful cultrated bill. It also lives upon insects, and digs them out of the holes of trees, upon which it can support itself in a manner similar to that of the Woodpeckers. It has, indeed, something of the air, as well as the manners, of those birds, but it wants their peculiarly distinguishing characters." MACGILLIVRAY says that "the Nutcracker forms the transition from the Crows to the Starlings, and, as M. TEMMINCK thinks, to the Woodpeckers, some of which it certainly resembles in the form of its bill, of which, however, the point is not compressed as in that family, but depressed as in the Starlings. Its feet are similar to those of the Crows, and still more of the Jays and Starlings, but are not more adapted for climbing than those of the last-mentioned families, although TEMMINCK states that its habits greatly resemble those of the Woodpeckers."

15. THE MAGPIE.

Corvus Pica, LIN. *Le Pie*, BUF. *Die Elster*, BECH.

Description.—This bird is about the size of a Pigeon, but, on account of its long tail, measures as much as eighteen inches in length. It is everywhere well known as a bird which frequents the habitation of man; and the colouring of its plu-

mage, although very simple, is yet handsome. It is black and white, but both colours are exceedingly bright, and it is still further ornamented by its conical tail, which has a purple tinge at the tip, and so passes off into steel-blue.

Food.—In its natural state, the Magpie feeds on insects, worms, berries, and roots; but when tame, or in the aviary, prefers meat and bread, and, if well trained, will appear at the dining-parlour window at meal times, and eat whatever may be offered it from the table. If more be given it than it can eat, it conceals what is left for another meal. This propensity may be remarked from the very first, in the young birds which are reared from the nest.

Breeding.—The Magpie builds on trees near human habitations, and generally lays four or five whitish-green eggs, covered with ashen-grey and olive-brown spots and stripes.

Attractive Qualities.—Of all German birds, the Magpie may be most easily and most completely tamed. It imitates all striking sounds, and learns to speak with even less difficulty than the various descriptions of Crows. It must, however, be taken out of the nest when quite young, and systematically instructed. PLUTARCH mentions one, in the possession of a barber at Rome, which, of its own accord, imitated not only the human voice, but the cries of various animals, and the sound of instruments; and was a general subject of conversation throughout the quarter of the city in which its owner lived. It may be taught to come and go at call without difficulty, and may be made tamer than the Pigeon, as it becomes exceedingly fond of the various delicacies of the table, and only eats worms and insects as dainties. The chief thing to be looked to, in the case not only of this, but of all birds which are to be tamed, is to take the young ones from the nest when they are a fortnight old. It must be fed at first on bread soaked in milk or water, afterwards on chopped meat, and at last on any kitchen refuse, or even cooked or rotten apples and pears which are useless for any other purpose. When it is so far fledged as to be able to reach a neighbouring tree, let it fly till it is tired, and then be lured back to its home. This may be repeated till it is completely fledged, when the wings must be a little clipped, till winter, when the feathers may be entirely pulled out, and allowed to grow again. At last it will become so accustomed to its owner, and the place where he lives, that it

may be allowed to range half a day at once. If it also learn to speak, the bird is all the more valuable. Even the old birds, which are easily caught in winter, by limed twigs baited with meat, may be accustomed to frequent the poultry yard—if their wings be cut in summer, and allowed to grow again through the autumn. In this case they return without timidity, and rear their young in summer, not far from the house, expecting to be supplied with food from the kitchen. It is not safe to leave near them anything shining, or metallic; for they will carry it away, and hide it in the ground with their superfluous food.

A friend writes to me, “I once reared a Magpie, which followed me about for a caress like a cat. It came at my call, without having been taught; and often followed me for hours, so that I had the greatest difficulty to get rid of it, and was obliged to confine it, if going where I could not take it. It was wild with any one else, though able to distinguish in any countenance the slightest change of expression. It sometimes flew to a great distance with its wild companions, but never entirely deserted me for them.”

ADDITIONAL.—In relation to the popular superstitions which have gathered around this well-known bird, and made it an omen of good and evil, some striking and pertinent observations will be found in MUDIE’s *History*, as well as much interesting information as to its habits and characteristics.

Owing, perhaps, principally to the hostility of gamekeepers, sportsmen, and gardeners, Magpies are nowhere very numerous, although they are to be met with in all the cultivated and wooded districts of England, Ireland, and Scotland; in the outer Hebrides, however, the Shetland and Orkney isles, according to MACGILLIVRAY, they are never seen, and but rarely in the large tracts of the Scottish central regions, because their habits unfit them to remain far from human habitations, where this naturalist thus graphically describes their haunts and habits:—“On the old ash that overshadows the farm-yard, you may see a pair, one perched on the topmost twig, the other hopping among the branches, uttering an incessant clatter of short hard notes, scarcely resembling anything else in nature, but withal not unpleasant, at least to the lover of birds. How gracefully she of the top twig swings in the breeze! off she starts, and directing her flight towards the fir-wood opposite, proceeds with a steady, moderately rapid, but rather heavy flight, performed by quick beats of her apparently short wings, intermitted for a moment at intervals. Chattering

by the way, she seems to call her mate after her ; but he, intent on something which he has espied below, hops downward from twig to branch, and descends to the ground. Raising his body as high as possible, and carrying his tail inclined upwards, to avoid contact with the moist grass, he walks a few paces, and espying an earth-worm half protruded from its hole, drags it out by a sudden jerk, breaks it in pieces, and swallows it. Now, under the hedge he has found a snail, which he will presently detach from its shell. But something among the bushes has startled him, and lightly he springs upwards, chattering the while, to regain his favourite tree. It is a cat, which, not less frightened than himself, runs off towards the house. The Magpie again descends, steps slowly over the green, looking from side to side, stops and listens, advances rapidly by a succession of leaps, and encounters a whole brood of chickens, with their mother at their heels. Were they unprotected, how deliciously would the Magpie feast—but, alas ! it is vain to think of it ; for with fury in her eye, bristled plumage, and loud clamour, headlong rushes the Hen, overturning two of her younglings, when the enemy suddenly wheels round, avoiding the encounter, and flies off after his mate.

“ There, again, you perceive them in the meadow, as they walk about with elevated tails, looking for something eatable, although apparently with little success. By the hedge afar off are two boys with a gun, endeavouring to creep up to a flock of Plovers on the other side. But the Magpies have observed them, and presently rising, fly directly over the field, chattering vehemently, on which the whole flock takes wing, and the disappointed sportsmen sheer off in another direction.”

JESSE, in his *Gleanings*, observes, that “ as he was passing a considerable length of wall, one day, he noticed five or six Magpies perched upon it, every now and then eagerly darting at the butterflies as they came near, and after making a short and elegant circular sweep, alighted on the wall again, and there feeding on their prey.” In France, the Magpie is a great favourite, being one of the few birds which no one seems to destroy ; it is accordingly very common there. In Sweden and Norway also, it is universally petted and protected. In *The Magazine of Zoology and Botany*, MR. HEWITSON observes—“ The Magpie is one of the most abundant, as well as the most interesting of the Norwegian birds ; noted for its sly cunning habits here, its altered demeanour there is the more remarkable. It is upon the most familiar terms with the inhabitants, perching close about their doors, and sometimes walking inside their houses. It abounds in the town of Drontheim, making its nest upon the churches and warehouses. We saw as many as a dozen of them at one

time seated upon the gravestones in the churchyard. Few farm-houses are without several of them breeding under the eaves, their nest supported by the spout. In some trees close to houses their nests were several feet in depth, the accumulation of years of undisturbed and quiet possession.

"The inhabitants of Norway pleased us very much by the kind feeling which they seemed to entertain towards them, as well as to most species of birds, often expressing a hope that we would not shoot many. Holes are cut in many of their buildings for the admission of some, and pieces of wood are nailed up against them to support the nests of others. At Christmas, that the birds may share their festivities and enjoyments, they place a sheaf of corn at the end of their houses."

In all the central portions of Europe the Magpie is a common and familiar bird. Southward it is found in Spain, Provence, Italy, in the Morea, Smyrna, Aleppo; in the country between the Black and Caspian seas. It is met with in India and China, where it is looked upon as a bird of happy augury, and also in Japan. According to AUDUBON, RICHARDSON, and NUTTALL, it is a native of the American continent from Louisiana to the Fur Countries, and across the Rocky Mountains as far as Kamtschatka.

Many of the old English poets have alluded to this bird as a noisy, chattering creature; thus, CHAUCER, in his *Canterbury Tales*, describing the miller's wife, says—

"And she was proud and pert as is a pie."

GISBORNE, in his *Walks in a Forest*, speaks of its restlessness and harsh voice—

"From bough to bough the restless Magpie roves,
And chatters as she flies."

TAMEABLE ONLY WHEN YOUNG.

15. THE ROLLER.

Coracias Garrula, LIN. *Rollier d'Europe*, BUR. *Die Mandelkrähe*, BECH.

Description.—In size and figure this bird resembles the Jay, being nearly one foot in length, of which the tail measures four inches and a half. The beak is one inch and a quarter in length, in shape like that of a Magpie, blackish, and with naked nostrils. Behind the eyes is a naked warty spot; the iris is grey; the feet somewhat more than an inch in height, and, as well as the toes, a dirty greyish yellow. The head, neck, throat,

breast, seat, greater and under wing coverts, are blueish green ; the back, shoulders, and the three last pen feathers, are liver-coloured : the tail coverts, lesser wing coverts, and the concealed side of the pen feathers, indigo blue on the inner margin. The outer plume of the pen feathers is black, with the half nearest the root blueish green. The tail is straight, a dirty blueish green at the root, but towards the point of a purer and lighter tinge. The two centre feathers are quite a brownish green ; the first is black at the point ; the second to the fifth are tipped with brown, and have a large blue spot on the inner plume. All the feathers have a peculiar metallic lustre.

The female, on the head, neck, breast, and belly, is reddish grey, mottled with greenish blue. The back and the hind-most pen feathers are a clear greyish brown ; the rump green, mottled with blue ; the tail blackish, tinged with green and blue. In other respects she is like the male.

Habitat.—This bird is a native of Europe and North Africa, though by no means to be found everywhere in those countries. In Germany it chiefly frequents oak and fir woods, especially those on sandy plains, though its traces are sometimes met with in other localities. In confinement it ought to be allowed to range the room with one wing cut.

Food.—It is said, when wild, to eat not only insects and frogs, but also roots, acorns, grain, and the like. As I have never seen it, when in confinement, take any vegetable nutriment, I have some difficulty in accepting the above statement.

Breeding.—The nest is built in hollow trees, and consists of twigs, grass stalks, feathers, and hair. The eggs, of which the female lays five or six, are white, at the upper end very round, and equally pointed at the lower. The male and female share the labours of incubation, which occupy from eighteen to twenty days. The young birds do not acquire the beautiful blueish green hue till the second year. Before that period the prevailing colour on the head, neck, and breast, is greyish white.

I had till recently believed that the Roller was untameable, but have been convinced of the contrary by Dr. MEYER, of Offenbach, and M. von CLAIRVILLE, of Wintershur, who have both been successful in the attempt.

Dr. MEYER's method is as follows : "The young birds are to be taken from the nest when half fledged, and fed with chopped bullock's heart, beef, and tripe, till they can feed them-

selves, when they may be supplied with the same food, or live half-grown frogs. The way in which they treat them is curious. They throw them up in the air, catch them as they descend by the hind leg, and beat their heads violently against the ground. These processes are repeated till the frog ceases to move, when it is swallowed. I fancy the object of this is, that the frogs, of which they will swallow three or four successively, may not move in their crops. When the bird has become accustomed to this diet, the meat may be mixed with barley-meal. I have seen cases in which it would eat bread, vegetables, and meal, somewhat moistened, but bullock's heart always remains the favourite food. I have never seen one of these birds drink.

"They learn to know their attendant, obey his call, and eat out of his hand, though they will not suffer themselves to be touched. They never become quite tame, nor leave off biting. Except when eating, they generally sit in one place, occasionally hopping up and down the room, though with no great activity, on account of their short feet. They ought not to be allowed to range the room entirely without restraint, nor be confined in a cage; as being exceedingly shy birds, they are apt to beat against the bars and kill themselves. The best plan is to give them their liberty, with one wing clipped. With companions of their own species, they are quarrelsome and apt to bite, but agree very well with other birds. I have kept them in a large aviary with other large and small birds, as well as in the dove-cote, among Pigeons not allowed to fly out. They are as healthy and lively when alone, as with companions."

I have since seen two of these birds in the possession of M. von CLAIRVILLE, and have kept one myself. They had been reared on bullock's heart, and as soon as they could feed themselves, were supplied with it, cut into thin stripes, in a trough with water. Beetles and other insects were their dainties.

Attractive Qualities.—The Roller has few recommendations except the beauty of its plumage. One in the possession of MADAME VON CLAIRVILLE, was so tame as frequently to fly into her bosom — provided no stranger were by—to be fed and caressed. The only voice they possess is an unpleasant cry, resembling that of the frog or Magpie.

PLATE 12.



Stewart delit

Lirars sc

GOLDEN ORIOLE.

ADDITIONAL.—The Coracine birds, or Rollers, are mostly inhabitants of warm climates ; one species occurs in Britain, and that only as a straggler. Of this, specimens have been most frequently shot in our eastern and north-eastern counties ; two are recorded to have been obtained in Orkney. MACGILLIVRAY describes the bird as of “a shy and restless disposition, it prefers the forests and solitary places, but sometimes associates with Rooks and other birds, searching the meadows and ploughed fields for food. It lives chiefly on insects, but also eats slugs, worms, reptiles, and soft fruits. Its flight is rapid, and it has been seen to descend at times like the Rook or Tumbler Pigeon. Its voice is said to be loud and harsh. It nestles in the hollows of trees, or, when these are wanting, in holes which it digs in the banks of rivers. The eggs are broadly elliptical, nearly an inch and a half in length, smooth, and of a glossy white. They are thus similar to those of the Kingfisher and Bee-eater ; and this circumstance, together with the similarity in the mode of nesting of these birds, indicates an affinity of structure.”

According to YARRELL, the young birds of this species do not attain to brilliant colours of plumage till their second year, previous to which they are dull brown above, and greyish green underneath. Adult females do not differ from males in colour.

BECHSTEIN has omitted to mention that one of the German names of this bird is *Birck-heher*, or the Birch-Jay.

16. THE GOLDEN ORIOLE.

Oriolus Galbula, LIN. *Loriot*, BUF. *Der Pirol*, BECH.

Description.—This bird, of which the male is exceedingly beautiful, is about the size of a Blackbird, being nine inches long, of which the tail measures three and a half. The beak is reddish brown, one inch in length, strong, convex, and the upper point, which is very sharp, bent over. The nostrils are open ; the iris a greenish brown ; the feet, which are one inch in height, and the toes, a dirty lead colour. The head, neck, back, throat, breast, belly, sides, and under wing coverts, are a beautiful golden yellow, somewhat lighter on the throat and the belly, and a little inclined to green on the rump. Between the corner of the beak and the eye is a black spot ; the eye-lids are edged with yellow ; the wings are black ; the coverts of the large quill feathers edged with pale yellow, which forms a yellow spot on each wing. The tail is straight, and the two middle feathers quite black ; but the rest only half-way from the base, and then yellow, yet in such a man-

ner that the outermost have most yellow, and the black gradually increases as the feathers are nearest the centre.

The female is not so handsome ; the golden yellow appears only at the end of the olive green feathers of the tail, and on the under tail and wing coverts. The rest of the upper part of the body is siskin green ; the belly is dirty greenish white, mixed with dark stripes ; the wings blackish grey.

Habitat.—When wild, it frequents isolated groves and thickets, near larger woods, where there are high and leafy trees. It prefers the bushy trees so much, that it is rarely seen distinctly. When the cherries are ripe, it also betakes itself to the orchards. It appears in Germany in May, when the trees are in leaf, and departs in flocks as early as August.

In the house, when it cannot be allowed to run or fly about, it may be confined in a large wire cage, which may be made like an ordinary Nightingale aviary. At night it is always very restless, if the cage have not a thick covering, and thus often rubs off its quill and tail feathers. Even when running about the room it is a clumsy bird, jumps awry, like its relative the Roller, on account of its short feet ; never sits still, and quarrels with and bites all other birds.

Food.—When wild, it feeds on berries and insects. If an old male be caught, like the Jays, by means of an Owl, put in a large cage in a quiet room, be fed at first with cherries alone, and afterwards mixed with bread soaked in milk, and dry ants' eggs, it may occasionally be kept alive for some time. Dr. MEYER kept an old male, which he caught in a Titmouse trap, a year and a half. At first it took the usual Nightingale's food, afterwards bread and milk, and at last anything that came to table.

Breeding.—The Golden Oriole breeds but once a year ; their purse-shaped nest is hung, with great art, on the fork of a branch in some thick tree, or bush : it is not unlike a basket with two handles. The female lays four or five eggs, which are white, with a few black points of various sizes ; and before the first moulting the young ones resemble the mother in appearance, and mew like cats. If it is desired to rear them, which requires very peculiar care and attention, they should be taken out of the nest when half fledged, fed at first with fresh ants' eggs and chopped bullock's heart, and gradually inured either to the usual Nightingale's food, or to bread

soaked in milk : they then live four years, and sometimes longer. It is to be regretted that the confined male birds never retain their beautiful black and yellow plumage, but become and remain, like the females.

Attractive Qualities.—I have seen two young males, which had been reared from the nest, that besides the natural song, like *hidahaya, goigaia*, whistled, one a flourish of trumpets, and the other a minuet. The round, full, flute-like tone, rendered their song exceedingly pleasing. Their yellow plumage was unfortunately tarnished, which frequently happens if they are kept in a room where there is tobacco, or any other smoke. Their call, by which they are so easily recognizable in June, is *Yo*, or *Puhlo*.

ADDITIONAL.—“The Orioles,” says MACGILLIVRAY, “appear to be allied to the Rollers; not only the form of their bill, but also their short tarsi and broad toes indicating this affinity. They belong to Africa, and the warmer parts of Asia and New Holland. One species appears in England as an occasional or accidental visitor,” and this is the bird here described by BECHSTEIN so fully, that little fresh information can be added to it. YARRELL gives an account of the several specimens which **have** been shot in this country, or are to be found in the various public or private collections of stuffed birds ; he also describes the nest of the bird as rather flat and saucer-shaped, generally placed on the horizontal fork of a bough of a tree, to both branches of which it is firmly attached. The materials used to form the nest are sheep’s wool and long slender stems of grass, so curiously interwoven as mutually to confine and sustain each other.” MR. MEYER, in his *Illustrations of British Birds*, gives a representation of one of these nests taken in Suffolk ; another collector is said to have had eggs of the Golden Oriole, which were taken in the county of Norfolk, by which it would seem that the bird does occasionally breed in this country.

The Spaniards term this bird *Turiol*, the French *Loriot*, the English *Oriole*, names which are said to have originated in the sound of its call-note, which they are supposed to resemble.

18. THE COMMON HOOPOE.

Upupa Epops, LIN. *Hupe, ou Pupet*, BUF. *Der Gemeine wiedehopf*, BECH.

Description.—This bird, about the size of a Missel-thrush, is one foot in length, of which the tail measures four inches. The beak is two inches and a half long ; black, thin, and

curved ; the feet are short and black ; the iris blackish brown. The crest consists of a double row of feathers, of which the longest is about two inches long, and all orange colour tipped with black. The head, neck, breast, and under wing coverts are reddish brown ; the belly white, marked on young birds with narrow dark brown lines running upwards. The upper part of the back, and the lesser wing coverts, are reddish grey ; the lower part of the back, the shoulders, and wings black, striped with a yellowish white. The rump is white ; the tail, which consists of ten feathers, black, but having across the middle a broad white band, forming an obtuse angle presented upwards.

Habitat.—The Hoopoe is generally to be found in summer, in woods which border on pastures and meadows. In August, after the hay harvest, the Hoopoe departs in flocks to the lower country. It is a bird of passage, leaving us in September, and returning at the end of April. It may always be seen more upon the ground than on the trees.

In the house it should not be kept in a cage, but allowed to range at will. It is exceedingly chilly, or, at least, is so fond of warmth as to sit almost constantly on the stove ; and will suffer its beak to be dried up rather than leave the warm place.

Food.—In a state of nature the Hoopoe eats the various kinds of insects which are to be found in dung. It is sometimes put in a granary to destroy beetles, spiders, &c., but the idea that it also catches mice is unfounded.

In captivity it is easily kept in condition upon meat, and bread soaked in milk, with an occasional meal-worm or two.

Breeding.—The Hoopoe builds in hollow trees a nest composed of cow-dung mixed with fine root-fibres, and lays three or four eggs. The attempt to domesticate old birds rarely succeeds ; it is better to take the young from the nest, and feed them on the flesh of young Pigeons. In six weeks they will be able to feed themselves. It is difficult to feed them, as their heart-shaped tongue is only as large as a half-bean, which occasions a difficulty in swallowing. They throw all their food up in the air, and catch it with open beak, as it falls.

Mode of Taking.—To take them, a spot in the meadows, which they frequent in August, must be marked ; a piece of wood eight inches long must be smeared with bird lime, and to it several live meal-worms are to be attached by a short thread. The whole apparatus is then to be set up on a mole-hill. When

the Hoopoe sees the worms, it darts upon them, and pulls the lined twig upon itself by the thread.

Attractive Qualities.—The Hoopoe is prized, not only for its beauty, but for its amusing gestures. It is particularly remarkable for a ceaseless nodding of the head, touching the ground every time—so that it seems to walk with a stick. The motions of its crest, wings, and tail are not less constant. I have kept several for the sake of their comical gestures, which they always begin the moment they are steadily looked at. M. von SCHAUROTH writes to me respecting the Hoopoe as follows: “With great trouble I succeeded in rearing two young Hoopoes, which I had taken from the nest, in the top of a high oak. They followed me everywhere, and when they heard me at a distance, they would utter a twittering cry of joy, and spring upon me. They did not fly much, yet seemed to find no difficulty in so doing. If I sat down, they would climb up my clothes as high as they could, especially if I was feeding them from a pan of milk, the cream of which they eat greedily. They did not seem satisfied till they had reached my head or shoulders, when they would perch and caress me; still it needed but a word to rid me of their company, in which case they would usually retire to the stove. In general they seemed to gather my wishes from my eyes, according to which they regulated their own proceedings. I gave them the universal paste, and sometimes beetles, which are favourite morsels, but never earth-worms. These insects they pierced with their sharp beaks, till the feet and wing coverts were detached, and the rest of the body soft; they then threw them up in the air, and caught them with open beak. If the food fell longitudinally it was swallowed; but if across the beak, it had to be thrown up again. They do not bathe, but only roll themselves in sand. I sometimes took them with me to catch flies in a neighbouring meadow, when I had the opportunity of noticing their natural fear of birds of prey. As soon as they saw a Pigeon or a Crow in the distance, they lay down on their belly, spread out their wings so that the pen feathers met, and the bird was surrounded with a crown, as it were, of pen and tail feathers, laid the head upon the back, and pointed the beak upwards. In this position the birds might have been mistaken for an old rag; and no sooner had the enemy passed over, than they sprang up with cries of joy. They were very

fond of basking in the sun. When content, they utter a quivering cry of *Wek! Wek!* When angry, the note is harsher, and the male sometimes cries *Hup! Hap!* The female had a habit of dragging her food about the room, till it became encrusted with feathers and dirt ; this accumulated in the stomach to a ball as large as a hazel-nut, of which she died. The male survived the winter ; but from sitting so near the stove, his beak dried up, so that he could not shut it within an inch, of which he died miserably."

ADDITIONAL.—“ This bird,” says MACGILLIVRAY, “ has been named Hoopoe, from the crest or tuft, *huppe*, in French, with which its head is adorned. Some, however, derive its name from its ordinary cry, which is said to resemble *up-up*, or *pu-pu*.”

M. NECKER, in his *Memoir of the Birds of Geneva*, states, that the Hoopoes fight desperately, and leave the ground covered with feathers ; and a correspondent of the *Magazine of Natural History* thus describes a favourite locality for these birds on the Continent :—“ On the Bordeaux side of the Garonne, and near the city, are large spaces of marshy ground, intersected by broad ditches and creeks terminating in the river, where, from the advantage derived from the water, many poplars and willows are planted for the sake of the twigs, which are much used for tying vines. These trees being topped at about ten or twelve feet from the ground, so as to induce them to sprout much, become very thick, and in the course of a few years, gradually decaying at the centre, are attacked by numerous insects, particularly the jet-ant, *Formica fuliginosa*. In these retired places, which are frequented only by a few cowherds and country people, the Hoopoe, which is a very shy bird, may be frequently observed examining the rotten wood, and feeding on the insects with which it abounds. The Hoopoe flies low and seldom, unless when disturbed, its food being so abundant as to require little search. It breeds in a hollow willow about the end of May. The young come out in June ; but I could not ascertain the exact time required for hatching.”

Instances of the bird’s breeding in this country are on record ; JESSE, in his *Gleanings*, mentions a pair which built their nest and hatched their young in a tree close to the house at Park End, near Chichester ; DR. LATHAM had a young bird sent him on the 10th of May ; and MONTAGUE speaks of a pair in Hampshire which begun a nest, but left it unfinished.

At times this bird breathes out a peculiarly low plaintive sound, resembling the note of the dove, of which we are reminded by these lines in MITCHELL’s *Ruins of many Lands*—



"The green cicada chirping 'mid the grass,
The crested Hoopoes singing as they pass,
To charm the sense and soothe the pensive heart,
And bid sweet dreams and gentlest fancies start."

19. THE COMMON CUCKOO.

Cuculus Canorus, LIN. *Coucou*, BUF. *Der Gemeine Kuckuk*, BECH. *Euro-pœan*, ashen grey, singing *Guchang*, *Gucher*, GER.

Description.—This bird, about the size of the Turtle Dove, is fourteen inches long, of which the tail measures seven; three quarters of it being covered by the folded wings. The beak, one inch long, curves gradually, is black above, and blueish underneath; saffron-yellow at the corners, and orange-red at the throat. The forehead and the circumference of the eyelids are yellow; the feet are yellow, and one inch in height, having two toes before and two behind, and thus being adapted for climbing. The head, back of the neck, back, rump, and wing coverts, are of a dark ashen grey; the back and the wing coverts changing like the Pigeon's throat. The under-part of the body to the breast is of a clear ash colour—throat white, with dark grey waving lines; the pen feathers dark brown, with white spots on the inner side; the tail feathers wedge-shaped and black, with oval white specks in the middle, which on those in the centre are hardly visible.

The female is smaller, and is on the upper part of the body dark grey, with dusky, dirty brown spots. The under part of the neck is ash-coloured and yellow, mixed with blackish-brown transverse streaks. The belly is a dirty white, with similar stripes of dark brown.

Habitat.—When wild, it is a bird of passage, appearing at the end of April, and departing in September.

In the house, it may be allowed to run about, or confined in a large wooden cage.

Food.—In a wild state, it eats several kinds of insects, and picks many caterpillars from the trees.

In confinement, it is fed with meat and the universal paste of wheat meal.

Breeding and Peculiarities.—The Cuckoo is the only bird which never hatches its own eggs, but lays one, or at most two eggs in the nest of any insect-eating bird. To tame it, it must be taken out of the nest; a thing which I have never done

myself, though several of my acquaintances have. As it is in every respect a remarkable bird, and one which many amateurs might willingly rear, I will subjoin the following communication on the subject from HERR v. SCHAUROTH : "The Cuckoo has hardly any recommendation as a house bird. When old, it is too stubborn and greedy ; and in general is either obstinately fierce, or sits in sullen melancholy. I have reared some ; the last I found in the nest of a Yellowhammer, who was very puzzled with it. It was yet blind, and nevertheless flew at me with great fury, when I took it out. On this account, I know not how the stupidity of its foster-parents can be excused. I had hardly had it six days, before it ate, in a passion, everything that was offered it ; and I reared it on bird's flesh. It was a long time before it learned to eat out of its trough ; and it was so violent in its habits and quips, that it upset all small vessels. The tail grew very slowly. It never became quite tame ; it always darted at my face and hands, as well as at everything that came too near it, and at other birds. It ate of the first universal paste largely, and discharged as copiously, and dirtied itself very much ; it also ate its own excrement. It is exceedingly clumsy with its short climbing feet ; it cannot walk at all, and at best can only be said to jump. It flies, however, very cleverly."

ADDITIONAL.—The name of this bird, and its curious cry, is familiar to every one, and yet few in reality know much about its habits, and not many have done more than catch just a glimpse of its form, as it flitted from copse to copse, or along the hedge-row, seeking its insect food, or a nest wherein to deposit its single egg, the hatching of which, and the rearing of the young bird, it leaves to a more attentive foster-parent. Whether the Cuckoo ever does take a share in the performance of the parental duties, has been, and still is, a disputed question ; ornithologists have generally inclined to the negative side, but from some very positive assertions recently made by J. M'INTOSH, in *The Naturalist*, it would appear that they have yet much to learn on this subject. He states, that with a pocket telescope, he distinctly saw the female Cuckoo feeding its young in the nest of a Hedge Accentor, constructed in a holly-bush about two feet from the ground. WILLIAM KIDD also asserts that such a fact has been witnessed by a friend of his, whose veracity he could not question ; the foster-parent in this case being a Redbreast, which was assisted in the work of procuring food for the young Cuckoo by the real parent.

It is scarcely necessary for us to do more than allude to the difference of opinion which exists on this subject, which has yet to be settled by close and attentive investigation, as have several other disputed points in the natural history of the Cuckoo : for instance, whether the female bird ever utters that peculiar cry from which the name of the species is derived, and whether she deposits her egg indiscriminately in the first nest which comes in her way, or, as Mr. DAINES BARRINGTON asserts, "looks out a nurse in some degree congenerous, with whom to entrust her young ;" again, whether she lays one egg only in a season, or several in different nests, and how she manages to convey her egg into some of the nests in which it has been found, having an aperture much too small for it to be ejected therein in the usual manner ; some affirm that the beak of the bird, and others the claw, is the instrument used for that purpose. Then, again, is the Cuckoo only an insectivorous and frugivorous bird ? is it also granivorous ? nay, is it not carnivorous ? According to ARISTOTLE and PLINY (and LINNÆUS appears to have believed this), the young Cuckoo, when it had attained a sufficient size, would sometimes kill and eat its foster-mother ; hence SHAKSPEARE makes the Fool in *King Lear* say :

"The Hedge-sparrow fed the Cuckoo so long,
That it had its head bit off by its young,"

in allusion to the unnatural conduct of the unhappy monarch's daughters. In the play of *Henry IV.* also, there is an allusion of a similar character. Then, why does not the Cuckoo incubate like other birds ? The French anatomist, M. HERISSANT, discovers a reason in its peculiar anatomical structure ; but, says GILBERT WHITE, here is the Fern-owl, which closely resembles it, and which does incubate ; and several other species might be named, which have just as good an excuse for neglecting the duties of maternity. Does the Cuckoo turn out the other eggs which she may find laid in a nest, previous to depositing her own there ? Does she watch about the spot where this deposit has been made, and have an eye, as it were, upon her offspring ? or is she wholly without parental care and affection ? Does the young Cuckoo shovel up, by means of a certain depression in its back, the eggs and young birds which incommoded it, and tilt them over the edge of the nest, as Dr. JENNER asserts ? and does the Titling, or the Wagtail, as the case may be, in five instances out of six, forthwith eject from its nest the intruded egg of the Cuckoo ? All these, and half a hundred other equally strange assertions, have been made and supported by good authorities, in reference to this bird, which is such a perfect feathered mys-

terry, that we are sometimes half inclined to disbelieve in its existence altogether, and to ask with the poet,—

“O, Cuckoo, shall I call thee bird,
Or but a wand’ring voice?”

The REV. F. O. MORRIS, in his *History of British Birds*, has brought together more evidence on these conflicting points of the Cuckoo’s history, than will probably be found in any other work. Quoting from this authority, we may state that “the bird is found throughout the whole of the European continent:—in the north, in Denmark, Sweden, Norway, Lapland, and Siberia; and in the south, in Greece and its archipelago, and Italy. In Asia it is found in Japan, Java, Kamtshatka, Asia Minor, India, and many other parts. In Africa also, in Egypt, and, according to TEMMINCK, in the south of that continent.

“In our own country it occurs in every county of England, Ireland, Wales, and Scotland; and in the Orkney islands the Cuckoo is frequently heard. A few breed every year in the retired parts of Hoy and Waas.

“The general appearance of the Cuckoo is strikingly like that of the female Sparrow-hawk. It frequents localities of the most opposite description—the dreary fen, the wild heath of the open treeless moor, as well as those in which brush-wood abounds, and the well wooded hedge-rows of the best cultivated districts.”

The Cuckoo generally arrives in this country about the middle of April, the males being a day or two in advance; the usual time of departure is about the end of July, or beginning of August, although almost every year specimens have been taken much later. GRAVES, in his *British Ornithology*, says he has known them as late as the 16th of October.

Much might be said, were this the place for it, respecting the popular sayings and superstitions which relate to this bird, which in Scotland is called “the Gowk,” whose curious cry is everywhere hailed as the harbinger of spring. The colliers in Shropshire, we are told, when they first hear it, leave off work, and have a holiday. Under certain circumstances, however, this note has been considered as one of evil augury. CHAUCER tells us:—

“How among men it was a common tale
That it was good to hear the Nightingale
Ere the *vile* Cuckoo’s note were uttered.”

All readers of SHAKSPEARE will bear in mind the reproach conveyed in

“Cuckoo, Cuckoo, that word of fear;”

and although they may not go back to ARISTOTLE, and give credence to his vile slanders, that the young Cuckoo eats first the fledgelings which share the nest with it, and then the Titling

which has hatched it, they may still be inclined to regard the bird as the very personification of ingratitude, like the stony-hearted daughters of King Lear ; whether or no, all must agree with LYDYATE, that

“ Between the Cuckoo and the Nightingale
There is a manner of strange difference.”

And yet, according to LISLE BOWLES, this bird, of all the songsters of the woods and fields, is the only really *scientific* performer ; his notes being the fifth and third of the diatonic scale, and therefore strictly in accordance with musical numbers. WORDSWORTH’s beautiful lines on the Cuckoo, and the pleasing ode by LOGAN, have been too often quoted to need a repetition here.

FOREIGN BIRDS.

20. THE MINOR GRAKLE.

Graccula Religiosa, LIN. *Mainate*, BUF. *Der Mino oder Plunderer*, BECH.

Description.—This bird, about the size of a Blackbird, is ten inches and a half in length. Its beak is one inch and a half long, curved, knife-shaped, naked at the root, and orange coloured, tipped with light yellow. The feet are orange ; the nostrils longitudinal, and situate in the middle of the beak ; the iris nut-brown. The feathers on the side of the head are short, like the nap of velvet, except in the middle towards the back. On each side a naked membrane extends from the eye to the back of the head, but is not there united. This is of unequal breadth, broadest at the corner of the eyes. It is yellow, a colour which at specific seasons of the year, or when the bird is pleased or angry, is changeable. The prevailing hue of the plumage is black, tinged with purple, violet, and green, according to the light in which it is viewed. A white stripe runs across the pen feathers. The tail, which is three inches in length, is straight.

Observations.—The Minor Grackle is found in Jamaica, in various parts of the East Indies, and in the islands beyond the Ganges, as far as Java. Its food is vegetable ; and the birds which are brought to Europe are very fond of cherries and grapes. If a cherry be shewn to them and not immediately given, they will cry and weep like a child. They seem exceedingly tame and affectionate ; whistle and sing admirably ; and chatter better than any Parrot. In Chinese aviaries they are very common, being brought from Java. In inland Germany, this bird is rarely to be found.

III. LARGE-BEAKED BIRDS.*

THE characteristics of this class of birds are a very large beak, generally hollow, and therefore very light, curved above, and hooked at the point; short and strong feet, in the species which we are about to describe, adapted for climbing; and a large tongue, fleshy, and rounded like the human tongue, which renders it easy for them to learn to speak. They are foreign birds, and if intended to talk, must be reared from the nest.

ADDITIONAL.—According to VIGORS, SWAINSON, and other eminent ornithologists of this country, the *Psittacidæ*, or Parrot family, belong to the order *Incessores*, which is included in that primary division to which the name *Scansores* has been applied, from the climbing and prehensile powers of its typical members. This tribe or division seems naturally to resolve itself into five circular groups or families, the representatives of the other four being the *Picidæ*, or Woodpeckers; the *Ramphastidæ*, or Toucans; the *Cuculidæ*, or Cuckoos; and the *Certhiadæ*, or Creepers. In the Linnæan and other artificial systems, the Parrots were considered as forming a single isolated genus, termed *Psittacus*, and under this generic term was included the Macaws, the Cockatoos, the Lories, the Parrakeets, &c., the various modifications of form exhibited by them being considered in the light of specific characters only. The enlightened and scientific views of recent naturalists have, however, led to a new order of arrangement, in which this erewhile genus *Psittacus* has taken its proper rank as a family, divided into groups or sub-families, of which SWAINSON distinguishes five, as under-mentioned, although, as SELBY remarks, “a stricter examination and analysis is required to ascertain the precise situation of species whose history is but little known.”

1st sub-family. *Macrocerina*, or Macaws, a splendidly attired group of birds, whose habitat appears to be confined to America; included in this group are those birds of nearly allied characteristics, distinguished by the generic titles of *Arara*, *Aratinga*, and *Psittacara*, and also the genus *Palæornis*, belonging to the old continent, the representative in its own circle, according to SWAINSON, of the raptorial order, and analogous to the dentirostral tribe of the *Incessores*.

2d sub-family. *Psitticina*, or Parrots, properly so called, the

* *Leriostres Grosschnäbliche Vögel*, BECH.

short and even tailed species, which are found distributed throughout all divisions of the globe within the tropics. This is the typical group of the *Psittacidae*, and is analogous to the conirostral tribe of the *Incessores*.

3d sub-family. *Plyctolophina*, or Cockatoos, including the birds commonly known by this name, as well as the black and other nearly allied species; they are natives of the Indian continent and islands, and of Australia. These represent the *Scansores*, and consequently the *Rasorial* order, in their own family.

4th sub-family. *Loriana*, or Lories, natives of India and its islands; herein are also included the numerous members of the genus *Trichoglossus* (VIGORS), and several other generic forms belonging to Australia, all of which are distinguished from the *Psittacidae* by their comparatively slender bill and papillose tongue. This division represents the *Tenuirostres*, and is the Grallatorial group of the *Psittacidae*.

5th sub-family. *Platycercina*, or Broad-tails, composed of the beautiful genus *Platycercus*, and of the other ground, or slender legged parrots of Australia. "In it," says SELBY, whom we have here followed rather closely, "we are inclined to place the black parrots of Madagascar, known by the name of *Vasa*. This division is considered as analogous to the Fissirostral tribe of the *Incessores*."

By BUFFON, and other naturalists of an early date, the geographical distribution of the Parrots was supposed to be confined to the sultry climate within the Tropics: but recent discoveries have shewn that it is much wider in extent, particularly in the southern hemisphere, where species have been found in latitudes as high as 50°, examples having been discovered and brought from the Straits of Magellan. In the northern hemisphere, the limit appears to be more restricted, as the Carolina Parrakeet of North America, and some few African species, are seldom seen beyond the 32d or 33d degrees. It is to the Equatorial Regions, however, that we must look as the metropolis of the family, as there the greatest variety of genera are met with, the species which inhabit the colder latitudes being, though numerous, confined to a very limited number of generic forms. In the majority of this family we find a plumage which, for richness and variety of colour, yields to few of the feathered race; and though by some it may be thought gaudy, and too violently and abruptly contrasted, still we think no one can look at some of the gorgeously decked Macaws, and splendid and effulgent Lories, or the diversely tinted Australian Parrakeets, without acknowledging them to be among the most beautiful and striking of the feathered race.

The general form of the *Psittacidae* may be stated as short, strong, and compact, but as deficient in elegance, in the short

and even-tailed species, in which the great bulk of the head and bill seems disproportioned to the rest of the body. In the Parrakeets, this disproportion is in a great degree counteracted by the elongation of the tail, and many of them exhibit an elegance and gracefulness of carriage surpassed by few other birds. The formation of the feet, which are *zygodactile*, or with the toes placed two forwards and two backwards, and in all but a few aberrant species expressly formed for firm prehension and climbing, evidently points to woods and forests as the natural habitat of the race. It is accordingly in those regions where the trees are clothed with perpetual verdure, and where a never-failing succession of fruits and seeds can be procured, that the Parrots are found in the greatest number and profusion. Thus, the recesses of the interminable forests of South America are enlivened by the presence of the superb Macaws, and the nearly allied species of the genus *Psittacara*; those of India and its islands by the elegantly shaped members of the genus *Palaeornis*, and the scarlet clothed Lories; while those of Australia resound with the harsh voice of the Cockatoos, and the shriller screams of the noctivorous *Trichoglossi*, and broad-tailed Parrakeets, or *Platycerii*. In these their natural situations, their movements are marked by an ease and gracefulness we can never see exhibited in a state of confinement. They are represented as climbing about the branches in every direction, and as suspending themselves from them in every possible attitude; in all their movements they are greatly assisted by their hooked and powerful bill, which is used, like the foot, as an organ of prehension and support. The pointed and ample wing, which prevails among the Parrots, indicates a corresponding power of flight; and, accordingly, we learn from those who have enjoyed the opportunity of seeing and studying them in their native wilds, that it is rapid, elegant, and vigorous, capable of being long sustained, and that many of the species are in the habit of describing circles and other aerial evolutions, previous to their alighting upon the trees which contain their food. Thus AUDUBON, in his account of the Carolina Parrakeet, says: "Their flight is rapid, straight, and continued through the forests, or over fields and rivers, and is accompanied by inclinations of the body, which enable the observer to see alternately their upper and under parts. They deviate from a direct course only when impediments occur, such as trunks of trees or houses, in which case they glance aside in a very graceful manner, as much as may be necessary. A general cry is kept up by the party, and it is seldom that one of these birds is on wing for ever so short a space, without uttering its cry. On reaching a spot which affords a supply of food, instead of alighting at once, as many birds do, the Parrakeets take a good

survey of the neighbourhood, passing over it in circles of great extent, first above the trees, and then gradually lowering, until they almost touch the ground, when, suddenly reascending, they all settle in the tree that bears the fruit of which they are in quest, or on one close to the field in which they expect to regale themselves."

Many of the species are gregarious, and except during the breeding season, are always seen in large and numerous bodies; others, as the Black Cockatoo, are met with in pairs or families. The places selected for hatching their eggs and rearing their young, are the hollows of decayed trees; they make little or no nest, but deposit their eggs, which, according to the species, vary from two to five or six in number, upon the bare rotten wood. In these hollows, it is said, they also frequently roost during the night, and such, we learn, is the practice of the bird previously mentioned, for the same author observes, "Their roosting place is in hollow trees, and the holes excavated by the larger species of Woodpeckers, as far as these can be filled by them. At dusk, a flock of Parrakeets may be seen alighting against the trunk of a sycamore or any other tree, where a considerable excavation exists within it. Immediately below the entrance, the birds all cling to the bark, and crawl into the hole to pass the night. When such a hole does not prove sufficient to hold the whole flock, those around the entrance hook themselves on by their claws and the tip of the upper mandible, and look as if hanging by the bill. I have," adds the narrator, "frequently seen them in such positions by means of a glass, and am satisfied that the bill is the only support in such cases."

The natural notes of this tribe of birds consist entirely of hoarse or shrill and piercing screams, with little or no modulation, and frequently reiterated during flight, as well as when otherwise engaged in feeding, bathing, or preserving their plumage. The power of imitating the human voice, and learning to articulate a variety of words and sentences, is not possessed by all the species, but is principally confined to the even-tailed Parrots, in which the tongue is large, broad, and fleshy at the tip. In disposition, with the exception of one or two forms, they are quiet and docile, and easily reconciled to confinement, even when taken at an adult age. Their flesh is said to be tender and well flavoured, particularly that of the younger birds, and is frequently used as food in the districts they inhabit.

The general characters of the family are, bill convex, large, deflected, thick, and strong. The upper mandible, overhanging the under, hooked at the tip, and furnished with a small cere at the base; the under mandible thick, ascending, and forming, when closed, an angle with the upper. Tongue thick, fleshy,

and soft. Nostrils round, placed in the cere at the base of the bill. Feet scansorial, the external toes longer than the inner. In regard to their internal economy, we may observe, that the bill is furnished with additional and powerful muscles, and that the intestinal canal is of great length, and destitute of cœca.*

The loquacity of Parrots, and their extraordinary powers of imitation and mimicry, together with the splendour of their plumage, have rendered them at all times favourite domestic birds, and numerous anecdotes are related in proof of their sagacity and vocal ability ; it will, however, be scarcely necessary to quote any of these, as they are to be found in works easy of access, and are no doubt familiar to our readers.

21. THE RED AND BLUE MACAW.

Psittacus Macao, LIN. *Ara rouge*, BUF. *Der Rothe Aras*, BEC.

Description.—This, like other parrots, is chiefly prized for the beauty of its plumage, and capabilities of speaking ; although some species—as, for example, the Grey Parrot—imitate the song of birds, and have a pleasant whistle of their own. All birds which are able to speak, have a thick rounded tongue, the string of which should be somewhat loosened to increase its freedom of motion. On this account, the Short-tailed Parrot, as well as Starlings and Blackbirds, which possess a peculiar conformation of the larynx, pronounce the most distinctly, and next to them, Ravens, Jackdaws, and Jays.

The Red and Blue Macaw is one of the largest of the Parrot tribe, being two feet eight inches long, and about the size of an ordinary hen. The beak is so strong as to break a peach stone with ease. The upper mandible, which projects considerably beyond the lower, is white ; the point and the sides at the base, as well as the whole lower mandible, black. The feet are grey, and adapted for climbing. The cheeks are covered only with a whitish, uneven skin ; the iris is light yellow. The head, neck, breast, belly, shanks, upper part of the back, and superior wing coverts, are a beautiful scarlet. The lower part of the back and the rump are light blue ; the feathers on the shoulders and the larger wing coverts are blue, mixed with yellow and green ; the pen feathers are on the outer plume a beautiful light blue, on the inner, greyish black. The tail is wedge shaped, the two centre pen feathers being scarlet tipped

* Vide *Naturalist's Library*, vol. v., "Parrots."

with light brown; the next on each side half blue and half red, the four outermost violet blue above, and beneath pale red.

There are varieties of this bird which exhibit some differences in the colours of the wings and tail, but these are unimportant. The female can hardly be distinguished from the male.

Habitat.—This bird is a native of Brazil, Guiana, and other parts of South America, and is generally to be met with in pairs, in swampy forests. In confinement it may either be allowed to range about, or there may be provided for it a smooth planed stand, with cross perches. Still, as, like all Parrots, it is a very dirty bird, it is best to place the stand in a wire aviary, not less than two feet and a half in width, and eight feet in height, in which it is not liable to rub off its beautiful tail feathers, and can enjoy the freedom of motion so essential to its health.

Food.—In its native country it feeds chiefly on the fruit of the fan palm. In confinement it will eat any kind of fruit; but is best fed with bread soaked in milk. Biscuit is a harmless diet, but meat, sugar or sweetmeats, are very unwholesome. If the bird survives, it is unhealthy; its plumage becomes rough, it tears out its feathers, especially in the wings, and even bites its own flesh. It drinks very little, which is, perhaps, accounted for by the usually moist nature of its food.

Breeding.—This Parrot usually makes its nest in a hole of a rotten tree, widens the aperture, if not large enough, with its beak, and lines the cavity with feathers. The female lays twice a year, two eggs, resembling in size and colour those of the Partridge. Even in confinement the females sometimes lay eggs, but they are generally addled, or if not, the birds, like Parrots generally, can very rarely be induced to sit. Cases have nevertheless occurred, in which a female Macaw of this species has hatched even Pigeons' and Hens' eggs. Those which are kept in Europe, especially if able to speak, are generally young birds which have been reared from the nest, as the old birds are not only difficult to tame, but altogether incapable of being taught, uttering only a harsh cry, the expression of their various passions.

Diseases.—This Macaw is subject to many diseases, especially decline; for the treatment of which the reader is referred

to the Introduction. In the moulting season, it, like all Parrots, requires assiduous attention, that not only its general health, but also the beauty of its plumage may be preserved.

Attractive Qualities.—The beautiful plumage forms the chief recommendation of this bird; but it may also be taught to pronounce several words distinctly, to know its home, and to come at its master's call. But these attractions are, perhaps, counter-balanced by the awkwardness of its movements, its manner of helping itself on with its beak, and its dirty habits. It is also bad tempered, and must not be left alone with children, as it is apt to fly at the face and eyes. On account of its dung, which is fluid and foetid, its cage must be cleaned every day.

22. THE BLUE AND YELLOW MACAW.

Psittacus Ararauna, LIN. *Ara bleu*, BUF. *Der blaue Aras*, BECH.

Description.—This bird, which is about the size of a Capon, being two feet eight inches in length, is, in my opinion, handsomer than the foregoing, though the colours are not so dazzling. The beak is black, the feet dark ashen grey; the cheeks flesh coloured, with stripes of short black feathers in the form of an S. The iris is light yellow; the throat is surrounded by a black band. The forehead as far as the crown, the sides of the head, and the smaller wing coverts, are pale green. The rest of the upper part of the body is a beautiful blue; the rump light blue; the belly saffron yellow; the shanks are orange; the wing coverts in the male, mottled with the same colour. The wings and the wedge-shaped tail are a fine blue; of the latter, the two centre feathers are uniform in colour, the rest are tinged on their inner edge with violet, and near the root are bordered with black. The colours are subject to but little variation.

Observations.—This bird is a native of Jamaica, Guiana, Brazil, and Surinam.

In its habits it agrees with the Red and Blue Macaw, and possesses the same qualifications as cage-birds. It does not, however, learn to speak with equal facility, though it pronounces the word "Jacob," and imitates the bleating of sheep, the mewing of cats, and the barking of dogs, with great ease and exactness. It has been noticed, as a peculiarity in this bird, that it only drinks towards evening.

PLATE 14



E. Lear delt.

MACROCERCUS MILITARIS.

The Great Green Macaw.

Native of Mexico & Peru.

London 1832.

23. THE GREAT GREEN MACAW.

Psittacus Militaris, LIN. *Der Grüne Aras*, BECH.

Description.—This bird, which has been well described and figured by EDWARDS, is somewhat smaller than the preceding, being two feet four inches in length. The beak is large and black; the feet a brownish flesh colour. The cheeks and the circle of the eyes are a pale reddish flesh colour, crossed by crooked stripes of black feathers. The head, neck, back, wing coverts and belly, are grass green, in some parts lighter, in others tinged with olive green. Over the forehead passes a thick band of bright red feathers, which has the appearance of coarse velvet. The green feathers of the rump are somewhat mixed with red; the pen feathers are blackish in front, becoming bluer as they recede, except that the last, together with the shoulder feathers, incline more to green. The rump is blue; the middle tail feathers, as is the case of the two preceding species, are very long, and all the feathers of the tail are blue, bright red at the roots, and tipped with green.

Observations.—This Macaw is a native of South America, though from its scarcity and price in Europe, it cannot be a common bird. It is exceedingly docile and talkative. The specimen which I have seen, imitated every thing that was said, called all the family by name, and was exceedingly obedient, faithful, and good-tempered.

24. THE ILLINOIS PARROT.

Psittacus Pertinax, LIN. *Perruche Illinoise*, BUF. *Der Illinoische Sittich*, BECH.

Description.—This is one of the Parrots most commonly in the possession of the bird-sellers. It is nine inches and a half in length; the beak is light ash colour; the eyes are surrounded by a bare grey membrane; the iris is dark orange; the feet dark grey. The prevailing colour is green, changing on the lower part of the body to yellowish grey; the forehead, cheeks, and throat, are a beautiful orange colour; the top of the head dark green, becoming towards the back lighter and mixed with yellow. The front of the neck is an ashen green; the belly is spotted with orange; the pen feathers a blueish green, black on the inner plume, and the five last grass-green. The wedge-

shaped tail is green, the centre feathers being uniform in colour; the others bordered partly with ashen grey, partly with light yellow.

In the female, the forehead is dark yellow, and the yellow mottling on the back of the head and belly is wanting.

Habitat.—These birds are natives of Brazil, Guiana, and Cayenne, where they frequent heaths and other open places, and build in the holes of the Termites. They are very sociable, and are often seen in flocks of 500; appointing, when engaged in feeding, one as a sentinel, who gives notice by his cry of the approach of an enemy. In confinement, a pair are usually put together in a large cage of brass wire. They are very affectionate, and one often dies of grief at the loss of the other.

Food.—Their food, in a wild state, consists of chestnuts, acorns, peas, &c. In confinement they are fed on bread soaked in milk, and nuts.

Attractive Qualities.—The beauty of their plumage, amiable disposition, and natural affection, are the qualities which chiefly recommend these parrots to the bird-fancier; as their talking powers are very limited, and the cry which they continually utter by no means agreeable.

25. THE BLUE-HEADED PARROT.

Psittacus Cyanocephalus, LIN. *Perruche à tête bleue*, BUF. *Der blankköpfige Sittich*, BECH.

Description.—This handsome and not uncommon Parrot is about the size of a Turtle-dove, being eleven inches and a half in length; of this the tail, in the middle of which meet the folded wings, measures six inches. The upper mandible is light yellow, tipped with light ashen grey, the lower uniformly ashen grey. The naked circle of the eye is yellow, the upper part of the body green, the lower part yellowish green. The forehead is tinged with red, the head blue, the throat violet, tinged with ashen grey, the sides of the throat dark yellow. The pen feathers are green, though ashen grey on the inner plume and at the points. The two centre tail-feathers are greenish, passing at the point into blue. The next are similar, but bright yellow on the inside. The four outside feathers are green on the outer plume, on the inner dark yellow,

though light yellow at the points. The two centre feathers are almost four inches larger than the outer ones ; the feet are blueish, and the claws grey.

Observations.—This bird is a native of the East Indies. It cannot be taught to speak, and is therefore chiefly prized on account of its beauty. It requires the same treatment as the preceding species.

26. THE YELLOW PARROT.

Psittacus Solstitialis, LIN. *Perruche jaune*, BUF. *Der Gelbe Sittich*, BECH.

Description.—This bird is also about the size of a Turtle Dove, being eleven inches and a half in length. The tail is wedge-shaped, and covered to a third of its length by the folded wings. The beak and feet are grey ; the throat, the naked membrane of the beak, and the circle of the eyes, are light ash colour, the iris light yellow. The prevailing colour of the plumage is orange, the back and wing coverts being spotted with olive green. The rump is yellowish green ; the region of the eyes, the sides, and the shanks are red. The wing coverts nearest to the body are olive green, bordered with orange. The larger pen feathers are blue outside, and inside yellowish green ; the smaller ones being wholly of the last named colour. The six centre tail-feathers are yellowish green, the three outside ones, of similar colour ; but edged with blue.

Observations.—This Parrot is a native of Angola. It learns to speak easily and well, and may in general be treated like others of the same species.

27. THE LONG-TAILED GREEN PARRAKEET.

Psittacus Rufrostres, LIN. *Le Sincialo*, BUF. *Der Rothschnäbliche Sittich*, BECH.

Description.—This bird, though twelve inches and a quarter in length, is not larger than the Blackbird. The tail alone, the centre feathers of which are almost five inches longer than the exterior ones, is seven and a half in length. The folded wings cover about a quarter of the tail. The upper mandible is blood red, but black at the tip, the lower altogether black. The bare circle of the eyes, the membrane of the beak, and

the feet, are flesh coloured. The iris is orange. The prevailing colour of the plumage is yellowish green; the border of the wings light yellow. Individuals of this species are found which vary as to the shade of green, and some have also the tail tipped with blue.

Observations.—This bird is a native of various parts of America, and of St. Domingo, Guiana, Brazil. It is very noisy, and may easily be taught to speak, whistle, and imitate the cries of other birds and animals. If shut up in a cage, its continual cry often makes it unbearable. It requires the same treatment as other Parrots, but appears to be less delicate than most.

28. THE PAVOUAN PARROT.

Psittacus Guianensis, LIN. *La Perruche Pavouane.* *Der Pavouan oder Guianische Sittich*, BECH.

Description.—This bird, about the size of a Missel-thrush, is twelve inches in length, including the tail, which measures six inches and a quarter, and has the two centre feathers six inches longer than the others. The beak is whitish, though ashen grey at the point; the membrane of the beak is also whitish, the feet grey, the claws black. The upper part of the body is dark green, the lower lighter. The cheeks after the third year are spotted with red. The small under wing coverts are scarlet, of a lighter tinge in the young birds; the larger wing coverts are bright yellow; the pen-feathers, like the plumage on the back, are edged on the inner side with yellowish green, and are blackish at the tip. Their shafts are black.

Observations.—It is a native of Guiana, Cayenne, and the Carabee Islands. Of all the small long-tailed Parrots, it learns to speak most readily and perfectly. It may be procured without difficulty from the bird-sellers, as it is not delicate, and bears the change of climate well. It requires no peculiarity of treatment.

29. THE RED AND BLUE-HEADED PARRAKEET.

Psittacus Canicularis, LIN. *Perruche à Front Rouge*, BUF. *Der Roth-stirnige Sittich*, BECH.

Description.—This Parrot, which is of common occurrence in Germany, is ten inches in length. Of this the tail, one third of which is covered by the folded wings, measures almost

half. The upper mandible is a light ashen grey, the lower darker, and often blackish. The naked membrane of the beak is a light grey; the circle of the eyes dark yellow, orange, and whitish; the iris orange, the feet light grey, mottled with flesh colour. The forehead is scarlet, the top of the head a bright blue, lightest behind; the upper part of the body is grass-green, the under part lighter. The large pen feathers are blue upon the outer edge, and sometimes scarlet at the root. The tail, of which the two centre feathers are above three inches and a half longer than the rest, is dark green on the upper side, on the lower brownish green.

The female is probably reddish yellow on the forehead, and light yellow on the circle of the eyes.

Observations.—This bird, which is a native of South America, is to be treated like the others above mentioned. It is very handsome in appearance, but never learns to talk well.

30. THE CARDINAL PARROT.

Le Perruche Cardinale, BUF. Der Cardinal Sittich, BECH.

Description.—This bird, about the size of a Turtle-dove, is twelve inches long; of which the wedge-shaped tail, whose two centre feathers are four inches longer than the others, measures six inches and three quarters. The beak is a peach-blossom red; its membrane ashen grey; the iris yellowish red; the feet grey. The whole of the head is violet, shot with blue and red; round the neck runs a black band; the throat is black; the upper part of the body dark green, the lower part light green. The root of the tail is light yellow; the two middle feathers blue tipped with white; the rest yellowish green, like the under tail. The female has a yellow beak, a dark ash blue head, and no band round the neck, but the place which it should occupy slightly marked with yellow.

In young birds the colour of the head is not distinct, but is sometimes rose-red, and sometimes green. The band round the neck is also wanting.

Varieties of the Cardinal Parrot.

A. THE BLOSSOM-HEADED PARRAKEET, *Lat. Psittacus Erythrocephalus, LIN. Peruche à tête rouge de Gingi, BUF. Der rothköpfige Sittich aus Gingi, BECH.*

The head is red, shaded with light blue, especially at the back,

A narrow black line passes from the chin to the nape of the neck ; beneath which is another fine light green line, composing with the former a species of neck band. The rest of the plumage is green, the under part of the body being tinged with light yellow. The tail is green on the upper side, with an inner border of light yellow.

B. THE ROSE-HEADED RING PARRAKEET. *Lat. Psittacus Erythrocephalus Bengalensis, LIN. Petite Perruche à tête couleur de rose à longs brins, BUF. Der Rothköpfige Sittich aus Bengalen, BECH.*

The upper mandible is light yellow ; the lower black ; the membrane of the beak brownish. The top of the head and cheeks are rose-coloured ; the back of the head blue ; the throat, and the ring round the neck, as in the last described. There is a red spot on the wing coverts. The two centre tail feathers are blue ; the others olive green, edged with blue.

C. THE BORNEAN PARRAKEET. *Psittacus Erythrocephalus Borneus, LIN. Der rothköpfige Sittich aus Borneo, BECH.*

The upper mandible is red ; the lower black ; the membrane of the beak and circle of the eyes ash-coloured ; the whole head is a peach-blossom colour, with a green tinge on the forehead. A black stripe runs from one eye to the other, over the naked membrane of the beak ; on the lower mandible arises a black stripe, which runs obliquely to each side of the neck, and becomes broader behind. The upper part of the body, as far as the tail, is light green, changing into light yellow in the middle of the wing coverts. The whole of the under part of the body from the chin is blood red, with a tinge of chestnut brown. The feathers on the shanks, seat, and middle of the belly are green. The two centre feathers are inclined to brown, and the shafts of all are white.

Observations.—These East India birds are chiefly prized on account of their beautiful plumage. They are lively, but shy ; and although noisy, never learn anything of their own accord, and are even difficult to teach.

31. THE PURPLE PARROT.

Psittacus Pennanti, LAT. La Purpure, BUF. Der Pennantsche Sittich, BECH.

Description.—The prevailing plumage of the male, which is about the size of a Sparrow-hawk, is red, the origin of the

name by which the bird is generally known. The beak is strong, curved, and has a sharp tooth at the end. The under mandible is angular at the sides, and rounded only in the middle, the colour being horn blue, changing into white at the point ; the iris is yellowish red, the membrane of the beak dark blue. The feet are dark flesh-coloured, or light brown, inclining to white, and very sealy ; the head and rump are dark crimson ; the feathers of the back and shoulders dark red, edged with black. The ground colour of all the feathers is indeed black ; which, however, is entirely concealed only on the head and rump. The throat, as well as the small outer wing coverts, and the edges of the centre pen feathers, are a beautiful bright blue, paler in some places on the wings than in others. The other coverts, as well as the last pen feathers, are black, with a narrow border of crimson, which again is edged on the inside with grass green. The pen feathers are black, the outermost edged with dark blue half way from the root ; the whole under part of the body is crimson, the thighs incline to blue. The tail measures one half of the whole length of the body, is very wedge-shaped, and dark blue. The outer feathers incline to a lighter blue on the inner plume, and at the point to white ; the four centre feathers approach in like manner to dark green. The wings cover a third part of the tail when folded.

The prevailing colour of the female, which the bird-dealers often call the Palm-bird, and sell as a distinct species, is greenish yellow. It is about the size of the male Sparrow-hawk. The head, the sides of the neck, and half the breast are bright crimson ; the throat is pearl blue, shading to sky blue on the edges. The top of the neck, the back, shoulders, and hindmost pen feathers, are velvety black, all the feathers being edged with greenish yellow. On the shoulders and the neck this border approaches almost to sulphur yellow. The rump and seat are green ; the long under tail coverts are crimson, with yellowish green edges ; the knee bands are tinged with light blue. The under part of the body is a fine light yellow, having, however, upon the feathers some irregular spots and dashes of red. The root of the tail is green, like a Duck's neck ; in other respects the wings and tail resemble those of the male.

Observations.—These beautiful and scarce Parrots are natives

of Botany Bay; they are unfortunately wild, timid, and difficult to teach. They have a chirping note, which is, however, rarely heard. As with the Amboina Parrots, their feathers are so loose as to come off if only touched. They require similar treatment with other birds of the same species, but are delicate, and need great care.

32. THE WHISKERED PARROT.

Psittacus Bimaculatus, SPAR. *Perruche à moustache*. *Der Zweiflechiye Sittich*, BECH.

Description.—This beautiful bird is one foot two inches in length, of which the tail measures about one half; it is therefore about the size of a Turtle-dove, and very slender. The beak is large, orange or pale blood red, tipped and bordered with a paler hue. The naked membrane is flesh-coloured, tinged with blue, and has a deep indentation; the iris, as well as the naked eyelids, is light yellow; the feet ashen grey. The head is light ashen grey, the top of it tinged with red: a narrow band across the forehead is black; the forehead itself pale yellow. The cheeks, from the root of the beak to the throat, are covered by an almost triangular black spot. The whole upper part of the body is grass green, the feathers having black quills. In the middle of the wing coverts is a greenish yellow spot; the pen feathers are blackish, but on the outer plume green, with a sulphur-coloured edge. The under part of the body is a dark rose colour; the sides under the wings yellowish green; the shanks, rump, and seat green. The tail is also green; the two middle feather two inches longer than the others, the upper half being of a blueish tint, and tipped with dark green. A variety of this bird has a black beak.

The female, or what is supposed to be so, is a pale orange red on the forehead, throat, and sides of the head and neck. From the corners of the mouth to the throat, runs a black oval stripe. The nape of the neck, shoulders, back, rump, and upper side of the tail are grass green; breast, belly, and seat a brighter tinge of the same colour.

Observations.—This is a very docile and talkative Parrot, of great tameness, and engaging and affectionate manners. Its cry is “*Gaie, Gaie.*” It is a native of the South Sea Islands and Botany Bay.

33. THE ROSE-RINGED PARRAKEET.

Psittacus Manillensis, BECH. *Varietas Psittaci Alexandri*, LIN. *Per-ruche à collier couleur de rose*, BUF. *Der rosennackige Sittich*, BECH.

Description.—This very beautiful Parrot, remarkable for the softness of its colours and the silkiness of its plumage, is about the size of a Missel Thrush. Its total length, including the tail, which makes up at least two thirds, is fourteen or fifteen inches. The two centre tail feathers are three inches and a half longer than the exterior ones. The beak is three quarters of a inch long, strong, very much curved, and crimson on the upper side; below blackish blue. The membrane of the beak is flesh-coloured; the eyelids bright red; the iris white, with a blueish tinge; the feet greyish brown. The plumage is generally light green; darker on the upper part of the body, and in the lower almost yellow. From the black throat a band, which is first black and then pale rose colour, extends round the head; and in old birds the nape of the neck has a blue tinge. There is a darker shade on the wing coverts and the scapulars, and the edges of the pen feathers are also darker. The rump, the tail coverts, as well as the first four side feathers of the tail itself, are greenish yellow; the two centre feathers, however, from the middle to the tip, which is dark green, are a greenish blue. The black on the throat of the female is not so extensive, nor has it the rose-coloured neck band. The under part of the body also is more inclined to yellow.

Observations.—This beautiful, tame, and very attractive bird is a native of the Philippine Islands, particularly of Manilla, though often found also in Africa. It may be treated like other Parrots, but very rarely learns to speak.

34. THE RED CRESCENTED PARRAKEET.

Psittacus Lunatus, BECH. *Der Schildkragen Sittich*, BECH.

Description.—This bird, somewhat larger than a Turtle-dove, is eleven inches and a half in length, of which the wedge-shaped tail measures six inches, and the beak one inch. The latter, which is very much curved, and provided with a sharp tooth on the upper mandible, is whitish, tipped with horn-brown. The circle of the eyes is small, bald, and greyish flesh colour; the iris a bright yellowish red; the feet dark ashen grey. The forehead is crimson, as well as a crescent-shaped

ring at the juncture of the neck and breast. The whole upper part of the body is leek green, becoming darker on the head, and each feather having a black shaft. The pen feathers are blackish green, somewhat tinged with blue on the outer plume. On the tail and wing coverts, the colour of the upper part of the body inclines to a lighter, or Siskin green. The under wing coverts are crimson; the lower part of the body is light green, tinged on the breast with red; the knees are crimson; the under side of the wings and tail a dirty yellow.

Observations.—This bird is very lively, learns to speak distinctly, and in an agreeable tone, and cries “*Goeur! goeur!*” frequently and loudly. It is treated like other Parrots, and, as the example from which this description is taken proves, attains a very great age.

35. THE GREY-BREASTED PARROT.

Psittacus Murinus, LIN. *La Perruche à poitrine grise*, BUF. *Der graubrüstige Sittich*, BECH.

Description.—This pretty Parrot, distinguished by its silvery grey colour, is about the size of the preceding. As the feathers of the head and cheeks are usually somewhat puffed out, and the beak is small, very much curved, and often buried in its breast, the bird has frequently something of an Owlish appearance. It is ten inches in length, of which the wedge-shaped tail measures five inches. The beak is only three quarters of an inch long, very much curved downwards, and light grey or flesh colour. On each side of the upper mandible are four sharp angles, and the tip of the lower mandible has the appearance of having been cut off. The iris is brownish grey; the circle of the eyes narrow, hollow, and light ashen grey; the feet are of the same colour. The forehead, half way up the top of the head, cheeks, throat, breast, and half the belly, are light or silver grey. The breast is clouded with white, producing at a distance the effect of transverse stripes, and the belly is mottled with yellow. The upper part of the body is a beautiful Siskin green, somewhat lighter on the head and shoulders, and therefore inclining to yellow. The remaining lower part of the body, with the rump, is apple green; the foremost pen feathers are blue, though having the inner plume, which is hidden, black, and the outer plume bordered with green. The hinder pen feathers are olive green; the tail

Siskin green, the feathers having blue shafts, and being tipped with greenish yellow; the two centre feather, which are concealed, are blueish green.

Observations.—This bird is very tame, learns to speak a word or two, and is of a very quiet disposition. Its call, “*keirsh!*” is loud and sonorous. It is the species of which PARNETTY speaks in his *Travels*. “These birds,” he says, “we found at Montevideo, where they were bought by the sailors for two piastres each. They were very tame and harmless, learned to talk without difficulty, and grew so fond of the men, as never to be easy away from them. The general belief is, that when confined, they do not live above a year.” This last opinion is, however, confuted, by the example from which this description has been taken.

36. THE CAROLINA PARROT.

Psittacus Carolinensis, LIN. *La Perruche à tête jaune*, BUF. *Der Carolinische Sittich*, BECH.

Description.—This bird, which is about the size of a Turtle-dove, is thirteen inches in length. The beak is yellowish white, and, as well as the eyes, surrounded by a bare light grey skin. The iris is light yellow; the feet and claws grey. The front of the head is orange; the back of the head, nape of the neck, and throat, light yellow; the rest of the neck, the back, breast, and sides, as well as the upper and under tail coverts, are green. The thighs are green, but near the joint orange; the edges of the wings are orange. The wing coverts are green on the upper side, and brown beneath; the smaller coverts green on both sides. The foremost pen feathers are on the inner side brown; on the outer side, near the root, light yellow, and then green, with tips inclining to blue. The hinder pen feathers are, on the upper side green, on the inner and lower side brown; the tail is green and wedge shaped.

Observations.—This Parrot is a native of Guiana, and migrates in autumn to Carolina and Virginia. It also builds, however, in Carolina. In the fruit season it does great damage, eating only the kernels of stone fruit, and leaving the rest. It is frequently brought to Europe, and when in confinement, is best fed on hemp seed. It is a very noisy bird, and a poor

* This bird is probably identical with the *Psittacus Ludovicianus*, LIN.
Papagai à tête aurore, BUF.

talker, and is therefore chiefly recommended to the amateur by its beauty and tameness.

37. THE AMBOINA PARROT.

Psittacus Amboinensis, LIN. *Le Lory Perruche tricolor*, BUF. *Der Amboinische Sittich Lory*, BECH.

Description.—This bird somewhat resembles the Ceram Lory, a variety of the *Lory Noirs* of BUFFON (*Psittacus garrulus, auroræ*, LINNÆUS), and is therefore sometimes called by the French, *L'Aurore*. It is one foot four inches in length, of which the tail, which is rounded at the end, measures half. The beak is three quarters of an inch long, sharp and very much curved; there is no naked membrane, and the nostrils are in front. The root of the upper mandible is orange; the centre lighter; the point, and all the lower mandible, black. The iris is golden yellow; the feet are ashen-grey; the scales rather inclining to dark brown. The head, nape of the neck, and all the lower part of the body, are dark vermillion; the upper part of the neck is encircled by a narrow and hardly perceptible blue collar. The whole upper part of the body is a fine green, inclining to blue at the edges of the feathers; the rump is dark blue. The tail is black, but covered on the upper side with faint green and blue stripes, changing into a decided green at the root; the tail is sometimes also dark brown. The vent is black, though the feathers have each a broad red border; the pen feathers are blackish blue, edged with green; the border of the wings is a glittering light green; the under side of the wings blackish blue.

In the female, the head is green; the throat and breast the same, but tinged with red. The vent is dark green, edged with red. The tail is more marked with green than in the male; the beak is horn-brown, with a shade of reddish yellow both above and below.

Observations.—This bird is a native of Amboina; is wild, shy, whistles shrilly, but does not learn to talk. Its cry is “*Geek!*” It may be treated like other Parrots. A peculiarity, however, is that its feathers are so loose as to come off in the hand, if the bird be but touched. They nevertheless speedily reproduce themselves.

38. THE GREAT WHITE COCKATOO.

Psittacus Cristatus, LIN. *Kakatoes à huppe blanche*, BUF. *Der Gemeine Kakatu*, BECH.

Description.—The Great White Cockatoo is about the size of a Barn-door Fowl, and measures seventeen inches in length. The beak is blackish; the naked membrane black; the iris dark brown; the circle of the eyes bare and white. The whole plumage is white, with the exception of the large pen feathers, and the outermost feathers of their tail, which, half way from the root, are on the inner side sulphur-coloured. The crest on the head is five inches in length, and is elevated or depressed at the will of the bird.

Observations.—This bird is a native of the Moluccas. It is generally kept in a large bell-shaped cage, made of wire, and provided with two perches, and a large metal ring, in which it likes to swing. It is to be treated like other Parrots, but, as well as the species next to be described, is very fond of pastry and various leguminous seeds.

Of the peculiarities of the Cockatoo, as a Cage-bird, BUFFON writes as follows:—"The Cockatoos, of which there are eight or nine species, all of which may be recognised by the tuft, are not easily taught to speak. The facility, however, with which they are tamed compensates in some degree for this defect. The ease with which they are reared seems to arise from their docility, in which they surpass almost all other Parrots. They listen and understand better, and are more obedient; but in vain attempt to repeat what is said to them, and seem as if they tried to make up for this by affectionate caresses and other expressions of feeling. Their mild disposition and graceful motions add much to their beauty. In some parts of India, we are told, they become so far domesticated as to build their nest on the roofs of the houses. In May, 1775, a pair, male and female, were exhibited at Paris, who, at the word of command, spread out the tufts, saluted the company with a nod, touched articles pointed out, with beak and tongue, answered questions in the affirmative or negative by certain signs, and in the same manner told the hour, the number of persons in the room, the colour of their clothes, &c., &c. They also kissed one another, and were said to have paired frequently. Although, like other Parrots, the Cockatoo uses its beak as an aid

to locomotion, its gait is by no means slow or awkward. It is, on the contrary, quick, lively and nimble."

39. THE LESSER WHITE COCKATOO.

Psittacus Sulphureus, LIN. *Kakatoes à huppe jaune*, BUF. *Der Gelbhaübige Kakatu*, BECH.

Description.—This bird is fourteen inches and a half in length: the beak, the naked membrane, and the feet, are blackish. The iris is reddish; the eyes are surrounded by a bare white skin. The general colour of the plumage is white, though having a subdued tinge of sulphur colour; the tuft on the head is tipped with sulphur colour, and under each eye is a spot of the same hue. The pen feathers are similarly coloured for two thirds of their length, beginning from the root.

This species is also a native of the Moluccas; it is easily tamed, and of a playful and affectionate disposition; fond of caressing and being caressed.

There are two varieties of this bird, which differ, however, only in size.

40. THE GREAT RED-CRESTED COCKATOO.

Psittacus Moluccensis, LIN. *Kakatoes à huppe rouge*, BUF. *Der roth-haübige Kakatu*, BECH.

Description.—This bird is somewhat larger than the Great White Cockatoo, and resembles in size the red and blue Macaw. The beak is blueish black; the naked membrane black; the bare circle of the eyes pearl grey; the iris pale red; the feet lead coloured; the claws black. The general colour of the plumage is white, tinged with pale rose colour. The moveable tuft on the head is very large, many of the feathers being six inches in length; the lower part of it is a beautiful yellowish red. The side feathers of the tail, half way down from the root, are sulphur-coloured on the inner plume; and the under-side of the wings is tinged with the same hue.

Observations.—This is a beautiful bird, of majestic bearing; but though becoming very tame, it is never so affectionate as the Great White Cockatoo. Like most of the species, it cries "*Cockatoo!*" and sometimes, in loud and sonorous tones, "*Derdeng!*"



E. Lear del'

1744

PLYCTOLOPHUS SULPHUREUS.

Lesser sulphur crested Cockatoo.

Native of the Moluccas.

It imitates the cries of animals, especially the cackling of Hens and the crowing of Cocks, and accompanies its cries by a flapping of the wings.

It is a native of the Moluccas, and is reared without difficulty.

41. THE RED-VENTED COCKATOO.

Psittacus Philippinarum, LIN. *Le petit Kakatoes des Phillipines*, BUF.
Der Rothbäuchige Kakatu, BECH.

Description.—This bird is about the size of the Grey Parrot, and thirteen inches in length. The beak is white or pale flesh colour, but grey at the root; the circle of the eyes is yellowish red; the feet grey. The general colour of the plumage is white, and the head is adorned with a tuft, which, however, is not visible, except when elevated. Its feathers are scarcely an inch and a half long, generally sulphur-coloured at the root, and white at the point, though some of them are light red. The two centre tail feathers are white; the rest, half way down from the root, sulphur-coloured on the inner plume. The feathers of the belly and tail coverts are red, tipped with white.

Observations.—The Red-vented Cockatoo is a native of the Philippine Islands. Its chief recommendations are its beauty and tameness, as it is unable to speak, and betrays an envious disposition when it sees other Parrots caressed. The cry of “*Aiai Miao*” is very disagreeable, and it never utters the word “Cockatoo.” It may be treated like others of the same species.

42. THE BANKSIAN COCKATOO.

Psittacus Banksii, LIN. *Le Kakatoes Noir*, BUF. *Der Banksche Kakatu*, BECH.

Description.—This is undoubtedly the most beautiful, the rarest, and most costly, of the Cockatoos. It is about the size of the Red and Blue Macaw, and from twenty-two to thirty inches in length. Its thick beak is yellow, tipped with black; the iris is red; the feet black. The general colour of the plumage is black; the crest feathers are tolerably long, but, as in the last-mentioned species, when not elevated, lie perfectly flat; on each of them is a yellow spot exactly at the point. The wing coverts are similarly ornamented; the feathers on the upper part of the breast and on the vent are edged with

yellow; the lower part of the breast and the belly are traversed by yellow stripes of various intensity of colour. The tail is rather long, and rounded at the end; the two centre feathers are black; in the rest, the centre, for about a third part of the whole length, is dark crimson, somewhat inclining to orange, and crossed by five or six irregular black stripes, about a third of an inch in breadth.

Varieties.—Of this species there are several varieties:—

a. In the first, the beak is lead-coloured: the head has a moderately sized crest of black feathers, intermixed with yellow; the throat is yellow; the sides of the head spotted with black and yellow; the whole body, with the wings, black, without any marking on the belly; the tail as in the preceding.

b. In the second, the beak is blueish grey, and the general colour olive or rusty black. On the sides of the head is a yellowish tinge, but none of the feathers are tipped with yellow, and there are no transverse stripes on the belly. The tail is as above. This may possibly be a young bird.

c. In the third—which is, perhaps, only the female—the beak is blueish horn colour; the head, neck, and lower part of the body dirty dark brown. The feathers, on the top of the head and nape of the neck, are edged with olive; the upper part of the body, the wings and the tail, are bright black. The centre tail feathers are uniform in colour, the rest scarlet in the middle, but not striped with black.

Observation.—This noble bird, a native of various parts of New Holland, is rare in England, and rarer still in Germany. Its motions resemble those of the Great White Cockatoo, and it may be treated in the same manner.

43. THE ASH-COLOURED PARROT.

Psittacus Erithacus, LIN. *Perroquet cendré au Jaco*, BUF. *Der asch-graue Papagei*, BECH.

Description.—This and the following are the most common and docile Parrots with which we are acquainted. It is about the size of a domestic Pigeon, and nine inches in length. The naked membrane and the circle of the eyes are nearly white; the iris yellowish white. The feet are ashen grey, which is the prevailing colour of the whole plumage. The feathers on

the head, neck, and under part of the body have a border of whitish grey. The rump and lower part of the belly are whitish grey, edged with ash-colour, which gives the whole body a scaly or powdered appearance. The tail is short and scarlet. The male and female resemble one another, and are equally docile.

Habit of Life.—This bird is usually imported from Guinea, where it is brought for sale from the interior of Africa. It is also found in Congo, and on the coast of Angola.

In confinement it is usually kept in a large bell-shaped cage, provided with a ring.

Food.—In its native country it lives on almost all kinds of fruit and grain, and grows fat on the seeds of the sun-flower, which to man is so violent a purgative. In confinement it will eat whatever is brought to table, but does best when fed on fruit, and bread soaked in milk. Meat, of which it is fond, produces diarrhoea, and a disease which impels it to pull out its feathers. If well taken care of, it has been known to live to the age of sixty years.

Breeding.—This bird, in a state of nature, makes its nest in hollow trees, and is the only one of the Parrot species which has been known to breed in Europe. BUFFON mentions a certain M. DE LA PIGEONIÈRE, of Marmanda, who possessed a pair, which for five or six successive years hatched and reared a brood. The female laid on each occasion four eggs, of which one was always unfruitful. In order to induce them to sit, a small barrel, open at one end, was placed in the room devoted to the purpose; and outside of this were fixed two small steps, that the male bird might be easily enabled to visit his mate. It was necessary to put on boots before entering the room, as the jealous bird attacked every body who came near his mate, with sharp blows of his beak. Whether old or young, these birds may be easily tamed, though the young ones which have been taken out of the nest—as is generally the case with those which are brought to Europe—are most docile.

Diseases.—The delicacies often given to these birds, render them especially liable to diseases; of which swollen feet and gout are among the most common. For these, no certain cure has yet been discovered. They may, however, be easily prevented, by keeping the birds clean, and not giving them either meat or confectionary.

Attractive Qualities.—This Parrot, like all the various species of Lory, not only learns very easily to speak and whistle, but to make all kinds of gestures, and is particularly distinguished by its affectionate conduct towards those who treat it kindly. The present variety is preferred by many, as it does not utter the unpleasant wild cry so ceaselessly made by the Lories, especially in the breeding season. It is very fond of imitating the voice of children, and prefers to be taught by them. The extent of its imitative powers may be inferred from an example given by BUFFON. A Grey Parrot was taught to speak by a sailor, in the course of a voyage from Guinea, and acquired so exactly his harsh voice and cough, as to be frequently mistaken for him. It was afterwards instructed by a young man,—and although it then heard no voice but that of its teacher,—the former lessons were never forgotten; and it often amused the bystanders by suddenly passing from a soft and agreeable voice to its old hoarse sea tone. This bird has not only the power of mimicking the human voice, but by its attention and manifest effort, shows also a desire of imitation. It continually repeats the syllables which it has heard, and, in order not to be misled in memory, endeavours to cry down all sounds which may disturb it. Its lessons make so deep an impression, that, as I have myself often noticed, it dreams aloud. When young, its memory is so good as to retain whole verses and sentences. RHODIGINUS mentions a Grey Parrot which could repeat the Apostles' Creed without a slip, and was on that account bought by a cardinal for one hundred crowns.

44. THE CERAM LORY.

Psittacus Garrulus, LIN. *Lory de Ceram*, BUF. *Der Geschwätzige Lory*, BECH.

Description.—The Lory of Ceram is about the size of a Pigeon, being ten or eleven inches long. It is very variable in colour, but the following description is the most accurate that can be given:—The beak is orange; the naked membrane at the base, and the circle of the eyes, ashen grey; the iris dark yellow; the feet brown. The prevailing colour of the body is scarlet, with the exception of the smaller and under-wing coverts, which are a mixture of green and yellow. The



E. Lear delit.

LORIUS DOMICELLUS.

Purple-Capped Lor.

Native of the Moluccas.

large pen-feathers are dark green; scarlet on the inner half, and ashen grey at the points. The two centre tail feathers are green at the root and tips, but pale red in the middle. The next on each side are more than half red, the other part green. The four outermost are scarlet at the root, violet in the centre, and dark green at the tips.

Remarks.—This bird is a native of the Moluccas; is, like the preceding, docile, and requires similar treatment.

45. THE PURPLE-CAPPED LORY.

Psittacus Domicella, LIN. *Lory à Collier*, BUF. *Der Purpurkappige Lory*, BECH.

Description.—This bird, so beautiful in plumage, and so noble in general appearance, is about the size of a Pigeon, being ten inches and a half in length. The beak is orange. The naked membrane, as well as the circle of the eyes, blackish; the iris a dark reddish brown; the feet ashen-grey; the claws black. The prevailing colour of the plumage is red; dark on the back, and lighter on the neck. The top of the head is a purple black, the back of it inclining to blueish purple. The throat is encircled by a light yellow, crescent-shaped collar, of varying distinctness. The edges of the wing and the lesser wing coverts are dark blue; the remaining portion of the wings grass-green, shot with light yellow. The larger pen feathers are a fine blue; the lesser yellowish green. The tail is rounded, except that towards the point it is somewhat wedge-shaped, and is of a blueish purple colour, with a tinge of reddish brown. The knee bands are blue, slightly inclining to green.

The female is smaller than the male; the collar on the neck is either wanting, or very indistinct; the blueish black colour of the head is less extensive; the edges of the wings are mingled blue and green; and there is no other blue upon the wings.

Variety.—In a variety of this species, the lower part of the back, the rump, the lower part of the belly, and the thighs, are white and rose-coloured. The upper and under tail coverts red and white; the wing coverts green, mixed with light yellow; the beak of the same colour. The rest of the plumage is as above described.

Observations.—In general habits this Lory agrees with

others of the same species ; but appears to me, on the whole, the most docile and talkative, the tamest, most affectionate and most attractive of all Parrots. It cries " *Lory* ;" talks incessantly and in a hollow tone, like that of a ventriloquist, and whistles tunes which have been played to it, in a clear and agreeable voice. It delights in being noticed and caressed.

As this species, which is a native of the Moluccas and of New Guinea, is preserved with difficulty during the voyage, it is rare and costly. It requires continual care and attention.

46. THE BLACK-CAPPED LORY.

Psittacus Lory, LIN. *Lory des Philippines*, BUF. *Der Schwarzkappige Lory*, BECH.

Description.—This Lory is a very little smaller than the preceding, being ten inches and three quarters in length. The beak is orange ; the naked membrane and the circle of the eyes dark flesh coloured, the iris orange red ; the feet blackish. The top of the head is black, tinged with blue ; the neck and body scarlet, except a black spot between the neck and the back, and another on the lower part of the breast, with which red feathers are intermixed. The upper side of the wings is green, and the inner plume of the pen feathers yellow, except towards the end, where they are dark brown. The middle pen feathers are yellow towards the edge ; the under wing coverts red ; the border of the wings yellowish. The lower part of the belly and thighs, as well as the vent, are a fine blue ; the upper side of the tail is blue, the middle feathers being dark green, and the inner plume of the other feathers yellowish, which gives all the under-part of the tail a yellow appearance.

Observations.—These birds are natives of the Philippines. They are imported into Europe less often than the preceding species, and are therefore dearer. They are, however, reported to be equally docile and affectionate.

47. THE WHITE-FRONTED PARROT.

Psittacus Leucocephalus, LIN. *Amazone à tête blanche*, BUF. *Der Weiß-sköpfige Amazonen Papagei*. BECH.

Description.—This well known Parrot is about the size of a Pigeon, and is among the most docile of the Parrots imported into Germany. The beak is sometimes flesh coloured, sometimes light yellow or white ; the iris is nut brown ; the circle

of the eyes white ; the feet dark brown. The head is white sometimes as far as the poll, and sometimes only on the forehead. In the male, the poll, or occasionally only the back of the head, is light blue, now and then spotted with red ; in the female the same part is green. The prevailing colour of the plumage is green ; and the feathers, especially in front, are edged with dark brown. The cheeks, the throat, and the top of the neck are a beautiful scarlet ; the belly green, mixed with red. The larger pen feathers are blue, though black on the inner plume ; the hinder ones green. The tail is short ; its two centre feathers are green ; the three next red for one third of their length from the root ; the external feathers are similarly marked, but are blueish on the outer plume. In the male the border of the wings is red.

Observations.—This bird is a native of Martinique, Jamaica, and Mexico. It may be treated in the same manner as the preceding species, and, like them, is very tame and talkative. Some trouble, however, is required to teach it German words, although it easily learns Dutch and English. It immediately learns to imitate the cries of animals, particularly dogs, cats, and sheep.

48. THE COMMON AMAZON PARROT.

Psittacus Æstivus, LIN. *Peroquet Amazone*, BUF. *Der Gemeine Amazonen Papagei*, BECH.

Description.—This bird is so often brought to Europe, that it is to be seen constantly both in Holland and England. Notwithstanding that it is as large as a good-sized Pigeon, it is very cheap. It is met with in many varieties, but the following is a general description. The bill is black ; the feet ash-coloured ; the iris golden yellow ; the forehead and the space between the eyes blueish ; the rest of the body and the throat a clear yellow, the feathers having blueish green borders ; the rest of the body light green, changing on the back and belly into a clear yellow ; the border of the wings red ; the upper wing coverts green ; the quill feathers black, yellow, violet blue and red ; the tail green, though when spread out, its feathers appear to have a black, red, and blue edge.

Observations.—This bird comes from Guiana, Brazil, and Mexico ; learns to speak with difficulty, and is very sociable

and faithful. In the necessary mode of treatment it resembles the foregoing.

49. THE YELLOW-HEADED AMAZON PARROT.

Psittacus Ochrocephalus, LIN. *L'Amazone à tête jaune*, BUF. *Der Gelb-köpfige Amazonen Papagei*, BECH.

Description.—This bird, about as large as a middle-sized Pigeon, is one foot two inches long, of which the beak measures one inch and a half, and the tail five inches. The beak is strong, orange on the sides of the upper and the root of the lower mandible, but elsewhere dark ashen grey or brown. The egg-shaped circles of the eye are bare, and a light ashen grey; the iris a golden yellow; the wax black; the strong feet ashen grey; the claws blackish. The forehead and back of the head, neck, back, shoulder feathers, wing coverts and hindmost tail feathers, are dark and leek green; the under part of the body and the under wing coverts are yellowish green. The upper border of the wings is deep red, mixed with yellow on the foremost joint; the top of the head, as well as a small band round the knees, deep or golden yellow. The front quill feathers are black, outwardly edged with green, but towards the quill tinged with blue; the middle quill feathers are also black, the foremost half deep red on the outer plume, tinged with blue towards the point; the hinder wing feathers green on the outer plume, but otherwise like the forward half; the under quill feathers blueish green; the tail green, growing yellowish towards the point; the three outer feathers, on the inside of the plume half way from the root, deep red, mixed with yellow at the side.

Varieties are found, having—1. The forehead a pale yellow, and the colours in general lighter. 2. The forehead and sides of the head a clear yellow. 3. The yellow of the head mixed with green.

Observations.—This bird is a native of South America. It seems to be incapable of learning anything, as the example I have before me will only utter a strong harsh scream, which is its natural voice. The amateur must, therefore, content himself with the scarcity and beautiful plumage of this bird.

50. THE BLUE-FACED PARROT.

Psittacus Autumnalis, LIN. *Le Crik à tête Bleue*, BUF. *Der Herbst Krich Papagei*, BECH.

Description.—The Blue-faced Parrot is as large as a mode

rately sized Pigeon. The beak is horn colour, with a long stripe of orange on each side of the upper mandible; the iris is orange; the circle of the eyes flesh colour; the feet the same, but darker; the claws black. Round the top of the head and the throat the colour is blue; the under part of the neck down to the breast red; the rest of the body green, except the great quill feathers, which are chiefly blue, though a few are red, with blue points. The hinder quill feathers are also green. The tail feathers are half green, inclining at the points to yellow; the under part of the side feathers towards the base, red.

Varieties.—1. In some, the head, instead of being red and blue, is red and white.

2. In others the forehead is scarlet; the top of the head blue; under each eye is an orange speck; the upper edge of the wings light yellow.

3. In others, the forehead and throat are red; behind and under the eyes is a patch of blue; the top of the head is yellowish green; the under edge of the wing is red; and the tail has a light yellow point.

4. In others, the whole body is blackish, except on the breast where the feathers are dark brown, edged with red. This is a very rare variety, possessed by the Duke of Meiningen.

Observations.—This bird is a native of Guiana. It does not learn much, and utters a continual cry of “*Girr, Girr!*”

51. THE BLUE-NECKED PARROT.

Psittacus Mestruus, LIN. *Le Papagei à tête et Gorge Bleue*, BUF. *Der Blauhälzige Papagei*, BECH.

Description.—This rare bird is about the size of the Ashen-grey Parrot (43), and resembles it in form and carriage. The beak is a dark horn colour, marked on each side of the upper mandible with a red spot. The eyes are reddish brown, and the circle round them a grey flesh colour. The head, neck, and a part of the breast are a fine indigo blue, somewhat shot with purple on the breast, while on the side of the head is a black spot. The back, belly, wings, and thighs are green, the feathers on the belly being tipped with blue. The wing co-

verts are yellowish green, inclining to gold colour; the vent scarlet, with a blueish tinge at the end of the feathers. The tail is green, with the inner half of the first three feathers red at the root; the feet strong and grey.

Observations.—This bird, which is a native of Guiana, lives long in captivity, and though it does not talk, is prized for its tameness and gentle disposition. It is scarce even in its native country.

52. THE ROSE-RINGED PARRAKEET.

Psittacus Pullarius, LINN. *Perruche à tête Rouge*, BUF. *Der Rothköpfige Guineische Parkit*, BECH.

Description.—To this little Parrot, which is not larger than a common Crossbill, and much esteemed throughout Europe, on account of its beauty and affectionate disposition, bird-sellers give the name of the Guinea Sparrow. The beak is red, growing lighter towards the tip; the naked membrane and the bare circle of the eyes are ash-coloured. The feet are grey; and the iris blueish. The general colour of the plumage is green, which is lightest on the lower part of the body. The front of the head and the throat are red; the border of the wings, and the lower part of the back, blue; the superior tail coverts green. The upper portion of the tail feathers is red; below this is a narrow black stripe, and the tips are green. The two centre feathers are entirely green.

In the female the colours are similar, though not so distinctly marked; the red tinge on the head is lighter, and the wings are bordered with light yellow.

Observations.—These birds are natives of Guinea, India, Java, and all parts of the torrid zone of the eastern hemisphere. They were formerly scarce in Europe, but are now to be seen at every bird-seller's; probably because the method of treating them during the voyage is now better understood. They are so affectionate that they cannot be kept except in pairs; and if one dies, it is necessary, to preserve the survivor, that a mirror should be hung near the cage, to cheat it into the belief that it is not alone. The male is especially attentive to the female, frequently caressing her, and offering her food. In their native country these birds do a great deal of damage to the corn-fields. In confinement they may be fed on canary seed,

with milk and bread. It is to be regretted that they cannot be taught to speak, and that their cry is so unpleasant. A pair may be kept to advantage in a bell-shaped wire cage, somewhat larger than that used for Canaries.

53. THE LITTLE BLUE AND GREEN PARRAKEET.

Psittacus Passerinus, LIN. *Etè ou Toui-étè*, BUF. *Der Sperlings Parkit*, BECH.

Description.—It is only four inches long, and not larger than a House Sparrow. The beak, the membrane at the base, the circles of the eyes, and the feet are orange coloured. The general colour is green; the rump blue; the little wing coverts and the tail are also green.

Observations.—This pretty little bird, which, like the last, lives most amicably with its mate, is rarely seen. It comes from Brazil and Guiana, and unfortunately cannot speak. It is fed with canary seed, hemp, &c.

54. THE YELLOW-BREASTED TOUCAN.

Rhamphastos Tucanus, LIN. *Toucan à Gorge Jaune du Bresil*, BUF. *Der Tukan, oder gelbbräustige Pfeffervögel*, BECH.

Description.—This and the two following birds, like the rest of their class, have a disproportionately large beak, which is convex above, and hooked towards the point. It is hollow, very light, and toothed at the edges like a saw. The feet are adapted for climbing. In summer, when they do not suffer from the cold, they are imported from North America into England and Holland, from whence they are brought into Germany, but they are not often to be found in aviaries. In confinement they will eat whatever is offered them—fruit, berries, especially grapes, bread, meat, frogs, &c. They swallow every thing whole, after having thrown it into the air, and caught it in the beak. They are taken from the nest, which generally stands in a hollow tree, and contains two young ones, and when reared, are very engaging birds.

The Toucan is nineteen inches in length, of which the beak measures six; this is grey at the base, and at the end black. The back is a greenish black; the cheeks, throat, and top of the neck orange; on the breast is a crimson stripe; the upper

of part the belly is a beautiful red, the lower part and the sides blackish, as are also the quill feathers and the tail. The upper tail coverts are sulphur-coloured, the under crimson; the feet and claws lead-coloured.

55. THE BRAZILIAN TOUCAN.

Rhamphastos Piscivorus, LIN. *Le Toucan à Gorge blanche du Brezil*, BUF.
Der Brasilische Pfeffervögel, BECH.

Description.—This bird is twenty-one inches in length, of which the beak measures six inches, and is three inches thick at the base. The upper mandible is yellowish green, with orange-coloured toothed edges; the lower mandible is a fine blue; the points of both scarlet; the iris nut brown; the circle of the eyes bare and a greenish yellow; the top of the head, neck, back, belly, wings, and tail, black; the sides, throat, and breast, yellowish white; between the breast and belly is a beautiful red crescent; the upper tail coverts are white, the lower are clear red; the feet light blue.

It is a native of Cayenne and Brazil.

56. THE PREACHER TOUCAN.

Rhamphastos Picatus, LIN. *Le Toucan à ventre rouge*, BUF. *Der Prediger Pfeffervögel*, BECH.

Description.—The Preacher Toucan is one foot eight inches in length. The beak is six inches long, and almost two inches thick at the base, of a greenish yellow colour, reddish at the point; the head, throat, neck, top of the back, and shoulders, are bright black, with a green tinge; the lower part of the back, rump, and upper and lower wing coverts are also black, but tinged with ashen grey. The breast is a beautiful orange; the belly, sides, thighs, and lower tail coverts a fine red; the quill feathers like the back, but paler; the tail is greenish black, tipped with red, but black on the under side; the feet and claws black.

The Preacher Toucan is a native of Guiana and Brazil, and has received its name from its unceasing cry. It is very easy to tame, and eats whatever is offered to it.

ADDITIONAL.—The *Rhamphastidæ*, or Toucan kind, forms one of the five families into which the order *Scansores* has been divided by VIGORS: the species included in this family are not

by any means numerous, and, according to CUVIER, they are found only in the warmest regions of America. They live on fruits, usually go in little flocks of from six to ten, and fly heavily, apparently with trouble to themselves. They can, however, elevate themselves to the summits of the highest trees, where they are fond of perching, and are almost in a continual state of agitation. They make their nests in the hollows of trees, and the female lays but two eggs. The young are easily tamed and reared, for they will eat any thing which is given to them—fruits, bread, flesh, or fish. They seize the morsels which are presented them with the point of the bill, throw them upwards, and receive them in their large gullet. If they seek their food on the ground, they usually take it up sideways and fling it in the air, and catch it in the same manner. The Toucans are so sensible to cold, that they dread the freshness of the night even in tropical climates. Their skin is generally blueish, and their flesh, though hard and black, is yet eatable. "When," says M. D'AZARA, "they take little birds in the nest, or morsels of meat or fruits, they dart them into the air, and by a slight movement of the bill, they direct them so as to be swallowed conveniently; then by another motion they receive them into their wide gullet. But if the morsel should be larger than the aperture of the latter, they abandon it without attempting to divide it."

The last-named naturalist furnishes some original observations on those birds, which may serve to complete their natural history. "The Toucans, contrary to what may be supposed, destroy a great number of birds, their large and bulky bill rendering them formidable to most species. They attack them, chase them from their nests, and even in their presence devour their eggs and young ones, which they either draw out of holes by the aid of their long bill, or bring to the ground along with the nests. It is affirmed that the Toucans do not even respect the nests of the *Aras* and *Caracaras*, and that if the young ones are too strong to allow themselves to be carried away from the nest, their adversaries strike them to the ground, as if their disposition led them not only to devour, but to destroy. Even the solid nest of the Rufous Bee-eater, which resists time, and other causes of destruction, is not safe from the attacks of the Toucans, which wait until the clay, of which it is composed, is softened by the rain, to batter it with strokes of their bills, that they may devour the eggs and young. During the season of hatching, the Toucans have scarcely any other aliment; but at other times they live on fruits, and sometimes on insects and the tender buds of plants; they then leave the other winged tribes in peace."

According to this author the tongue of the Toucan is inflexible,

and can be of no use for the direction of the aliment, or the formation of the cry, which, in the two species of Paraquay, is nothing more than may be expressed by the syllable *rac*.*

IV. WOODPECKERS.†

In these birds the beak is generally straight, very rarely curved, angular, not thick, and moderately long. The feet are short, and usually adapted for climbing.

ADDITIONAL.—“Under the name *Picus*,” says CUVIER, “which we may translate by our popular term Woodpecker, naturalists unite a number of birds, which constitute a very natural genus of the order *Scansores*. Their hard tongue, armed with solid corneous papillæ, is a very proper weapon for seizing the insects, and more especially the soft larvæ which these birds seek under the bark, or in the tender and rotten wood of old trees. The feet, furnished with claws, strong and crooked, assist them in climbing along the trees, which they most frequently ascend in a spiral direction: they are also capable of running along the branches horizontally, and in opposition to their own proper weight.

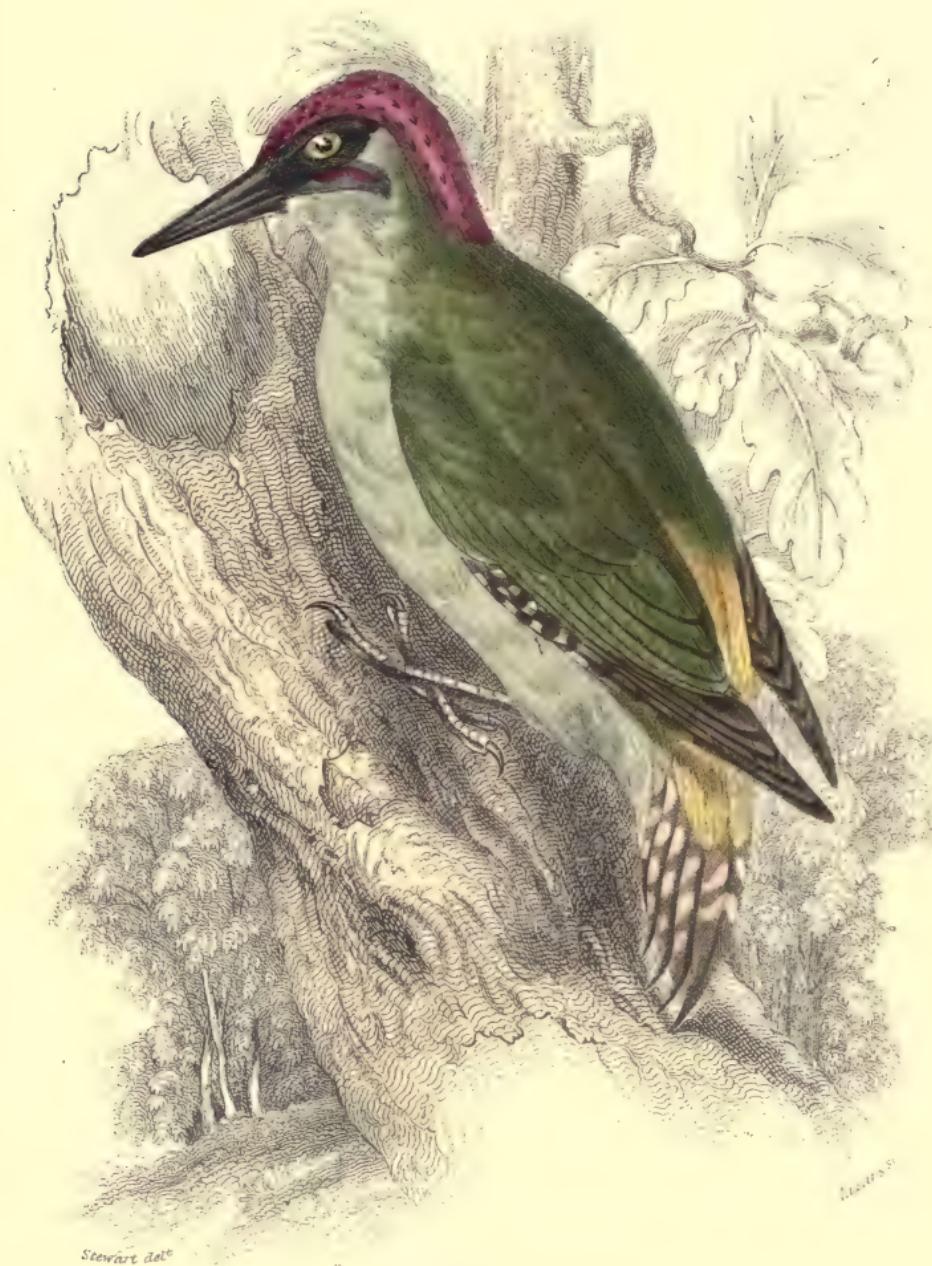
“The cry of the Woodpeckers is sharp and piercing; their flight heavy, and by springs. They are easily recognised by the redoubled blows with which they strike the trees, to terrify the insects which are concealed under the bark, or catch them if the wood be soft enough to yield to their strokes. The Woodpeckers are never fat; their flesh is hard, coriaceous, black, and, consequently, in little estimation. Their plumage is exceedingly various, and they exhibit in the upper parts of it all colours, blue excepted.

“Woodpeckers are continually occupied in hollowing trees, into the holes of which they retire during the night, and also when they lay their eggs, which the female deposits without making any nest. The parents keep the young birds until they are of age for reproduction. During the day they remain isolated, and their life seems a laborious and active one. The species of this genus are very numerous (four only are known as British birds); even BUFFON was acquainted with nine-and-thirty; but since his time the number has been wonderfully increased. They are extended over the globe through every latitude; two-thirds of them are found between the tropics; but

* Griffith’s Cuvier, vol. vii. p. 546.

† *Pici. Spechtartige Vögel*, BECH.

PLATE 17.



Stewart delt.

GREEN WOOD PECKER.

they abound most in the humid forests of America. It is, however, remarkable enough that none are to be found in New Holland.

"Though the Woodpeckers constitute a very natural genus, and all appear as though they were formed in one type, yet the manners of some species vary considerably. There are some which do not climb, although their organization might lead us to believe they did; but, on the contrary, they live on the ground, or in the rocks."*

(A.) EUROPEAN BIRDS.

TAMEABLE WHEN YOUNG.

57. THE GREEN WOODPECKER.

Picus Viridis, LIN. *Pic Verd*, BUF. *Der Grünspecht*, BECH.

Description.—The Green Woodpecker is about the size of a small Pigeon, being twelve inches and a half in length. The tail, half of which is covered by the folded wings, measures four inches and a quarter. The beak is one inch and a half long, trilateral, sharp at the point, and of a dark lead colour; the iris is light lead colour, with a faint brown stripe round the pupil. The tongue, which is five inches in length, is, like that of all Woodpeckers, provided with a horny tip, to catch and pierce insects; the feet are a greyish lead colour, and adapted for climbing. The top of the head, as far as the nape of the neck, is a beautiful crimson. In old birds a black stripe, tinged with red, runs down each side of the neck. The upper part of the body is a bright olive green; the lower a dirty greenish white, marked on the belly with indistinct transverse stripes, which become more visible on the side.

The head of the female is never so red as that of the male, and for the first year is entirely grey.

Habitat.—In summer the Woodpecker frequents woods and retired gardens, but in winter, when the snow falls thickly, it approaches the villages, and flies about the gardens near the houses. It conceals itself at night in a hollow tree. In rotten trees it excavates large and deep round holes with its beak, in order to get at the insects which are there to be found. It never, however, attacks a healthy tree, though often unjustly

* Griffith's Cuvier, vol. vii. p. 510.

killed by the forester as a destructive bird. Sometimes it merely knocks at the tree, to frighten out the insects; and this it does so quickly, as to produce on the ear the sensation of a continuous sound.

Such is its wild and restless disposition in confinement, that it must be restrained with a chain.

Food.—In a wild state it feeds upon the maggots and insects which are found in the wood and under the bark of trees; ants, the larvæ of wasps, and in winter, even bees.

In confinement it will eat nuts, ants' eggs, and meat.

Breeding.—The female lays, in some hole of a tree, three or four white eggs. The young ones, if it be desired to rear them, must be taken out of the nest when half fledged. The old birds are untameable, and, as far as my experience goes, will not even in confinement eat.

Attractive Qualities.—The only recommendation possessed by this bird is the beauty of its plumage, as it is always wild and untractable; and never, under any circumstances, becomes accustomed to captivity. A pair, however, form an agreeable variety in an aviary, and it is curious to see them crack their nuts.

ADDITIONAL.—“The Woodpecker,” says MUDIE, “is especially a bird of the ancient forests. You do not find it in the hedge or the coppice, where so many of the little birds, especially the summer migrants, build their nests, and spend their mid-days, when the reflections of the sun come bright on all sides of the foliage, in picking the soft caterpillars from the leaves, or capturing the insects that resort thither for the purpose of depositing fresh myriads; and when they have thus secured the shelter and beauty of their habitation, farewell the evening, and again hail the morning, with their joyous songs; the aged tree is all to the Woodpecker, and the Woodpecker is much to the aged tree.”

MACGILLIVRAY states that “this bird does not occur in any part of the north or middle divisions of Scotland, and that if it exists in the southern parts it must be extremely rare.” MR. YARRELL, he thinks, must have erred, in alleging it to be ‘found over a great part, if not all, the wooded districts of England and Scotland.’ Even in the north of England he says it is of very uncommon occurrence; but as we proceed southward, it increases in frequency, and in some districts, especially the southern and midland, it is by no means uncommon. It is permanently resident, and does not appear to shift its quarters much, remaining at all seasons in the woods, and occasionally

betaking itself to orchards and gardens. Its flight is rapid, and undulated when protracted, and all its motions are lively and indicative of great vigour. It is thought to announce the approach of rain by a peculiar cry, which may be likened to the syllables *pleu, pleu*, but its ordinary note is harsh, and in the breeding season it emits a noise resembling a shout of laughter, whence its name, *Yaffler*."

This is but one of the many names by which the bird is known in various parts of this country; it is so called in Surrey and Sussex. WHITE, of Selborne, says, "the Woodpecker laughs." THOMAS HOOD, in that powerfully descriptive poem of his, *The Haunted House*, speaks of

"The ringing of the Whitwall's shrilly laughter."

Wetwall, Woodwall, Woodwale, or Woodwell, which are, in fact, but modifications of one word, are terms used by some old authors, and generally considered to refer to one species of our English Woodpeckers, though to which of them is a matter of doubt. WILLOUGHBY and RAY apply the name Wetwall to the Greater Spotted Woodpecker; and in the New Forest, Hampshire, at the present day, this bird is variously called Woodwall, Woodwale, Woodnucker, and Woodpie, as we are informed by YARBELL, in whose *History of British Birds* will be found an interesting examination into the probable origin of the several terms which have been supposed to refer to the Green Woodpecker. From this work we also learn that in some parts of Hertfordshire, and the adjoining county of Essex, the bird is called Whet-ile, probably from whittle, "to cut or hack wood." Hew-hole is another term used; it is sufficiently explained by the well-known habits of the bird. Woodspeite is another name, and sometimes spelled Woodspeight, the first syllable being derived, we are told, from woad, in reference to the green colour of the bird, and the second syllable from the German word *specht*, a Woodpecker. BECHSTEIN, it will be seen, calls this bird *Grünspecht*. The term Rain-bird we have already noticed. In Northumberland, according to WALLIS, the historian of this county, the common people call the bird Rain-fowl, because it is more loud and noisy before rain. Woodpeckers were called by the Romans *Pluviae aves*, probably for the same reason. The Green Woodpecker is said by MACGILLIVRAY to be very generally dispersed over the European continent, from Scandinavia to Greece. PROFESSOR JAMESON states, that it occurs also in the Himalayan range of mountains. MR. HARLEY has given a very characteristic account of its habits, as observed in the neighbourhood of Leicester, from which we make an extract. "Its

flight is undulating, but the last undulation before the bird alights on the hole of the tree is much longer than the first. I have never seen it descend the tree after the manner of the Nuthatch, nor have I reason to think that it ever does so. Some authors, in their history of the bird, speak of its carrying away the chips from the foot of the tree in which it has been preparing a place for its offspring ; but although such may be the case, I have never, after a very minute search, seen either male or female removing the chips, which, on the contrary, I have always found in profusion near their holes. This bird never uses masonry, as the Nuthatch does, at the mouth of the holes which it chooses for nidification. I have never found any appearance of nest, excepting of decayed wood, in which were laid from five to seven delicate and beautiful white eggs."

58. THE GREATER SPOTTED WOODPECKER.

Picus Major, LIN. *Epeiche ou pic varié*, BUR. *Der Buntspecht*, BECH.

Description.—This bird, which is nine inches in length, is about the size of a Song Thrush. The tail, of which the folded wings cover a little more than half, measures three inches and a half. The beak is almost one inch in length ; on the upper side five-cornered, and a blackish horn colour ; but on the lower, it has a blueish tinge. The feet are thirteen lines high, and of a blueish olive green ; the iris is bluish, but surrounded by a white ring. The forehead is yellowish brown ; the top of the head black ; but edged towards the neck with a crimson stripe. The beak is black ; the shoulders white ; the wings and tail striped with black and white, and having over the whole a tinge of yellow. The under part of the body is a dirty reddish white ; the vent is crimson.

In the female the red stripe on the neck is wanting.

Observations.—The larger Woodpecker frequents gardens and groves, and feeds on insects, hazelnuts, beechmast, acorns, and the seeds of pine and fir-cones, &c. Before opening nuts, it usually fixes them in some crevice of a tree. The female lays from three to six white eggs, in a hollow tree. Before the first moulting, the head of the young birds is altogether red. If it is intended to rear them, they should be taken out of the nest when half grown, and fed on ants' eggs, meat, and nuts. In other respects, the observations on the Green Woodpecker apply also to this bird.

ADDITIONAL.—Of the Pied, or Greater Spotted Woodpecker, MACGILLIVRAY writes, “that it is extensively distributed in England and Scotland; but in all parts is rare, although specimens are not unfrequently obtained. It is a permanent resident, and has been found breeding in various districts. In England, where it has been found from the northern counties to those bordering on the channel, it is more common than in Scotland, though less numerous than the Green Woodpecker.”

MONTAGU states, that “it rarely descends to the ground in search of food, and more frequently makes that jarring noise for which the Woodpeckers are distinguished than either of the other species, especially when disturbed from the nest, which,” he continues, “we had an opportunity of observing. It was with difficulty the bird was made to quit her eggs; for, notwithstanding a chisel and mallet were used to enlarge the hole, she did not attempt to fly out till the hand was introduced, when she quitted the tree at another opening. The eggs were five in number, perfectly white and glossy, weighing about one drachm, or rather more. They were deposited two feet below the opening, on the decayed wood, without the smallest appearance of a nest. As soon as the female had escaped, she flew to a decayed branch of a neighbouring tree, and there began the jarring noise before mentioned, which was soon answered by the male from a distant part of the wood, who soon joined his mate, and both continued these vibrations, trying different branches, till they found the most sonorous.”

Mr. HARLEY, of Leicester, writes respecting this species as follows:—“We have the Greater Spotted Woodpecker here also, but it is not quite so common as the green one. It affects the deep umbrageous woods of Oakley and Piper. In Worcestershire and Herefordshire, I have found it upon the moss-grown apple trees, particularly the very aged ones. From the attention I have paid to its habits, I think I say the truth, when I affirm that it affects the tops of trees more than its congener does. The common people here, who have a knowledge of the bird, call it French Magpie; and in the counties of Salop and Stafford it is called the Woodpie.”

In reference to the particular sound made by this bird when seeking its food, PENNANT remarks:—“By putting the point of its bill into the crack of the limb of a large tree, and making a quick tremulous motion with its head, it occasions a sound as if the tree was splitting, which alarms the insects, and induces them to quit their recesses; this it repeats every minute or two for half an hour, and will then fly off to another tree, generally fixing itself near the top for the same purpose. The noise may be distinctly heard for half a mile. This bird will also keep its

head in very quick motion while moving about the tree for food, jarring the bark, and shaking it at the time it is seeking for insects."

59. THE MIDDLE SPOTTED WOODPECKER.

Picus Medius, LIN. *Pic varié à tête rouge*, BUF. *Der Weisspecht*, BECH.

Description.—This bird resembles the former in almost every respect, except that it is a little smaller. The beak is smaller, far thinner, and very pointed. The top of the head is crimson, and the vent rose-coloured.

Observations.—It is less common than the larger species, and the young, though not very tractable, are yet more docile. Like the preceding, this bird may be kept in a cage, and confined by a light chain.

60. THE LESSER SPOTTED WOODPECKER.

Picus minor, LIN. *Petit Epeiche*, BUF. *Der Grasspecht*, BECH.

Description.—This bird, about the size of a Lark, is five inches and a half in length, of which the tail measures two inches. The folded wings extend to the middle of the tail. The beak is seven lines long, and greenish black : the feet are of the same colour. The rump is white ; the head crimson at the top, and black at the back. The back is white, with blackish transverse stripes. The under part of the body is red, greyish and white, marked on the sides with a few black streaks.

The female has no red on the head.

Observations.—This is a rare bird ; it is an inhabitant of the woods, and lives on the insects which it picks from the bark and moss of trees. It may sometimes also be seen hopping among the grass, in search of insects. The young birds, which are to be reared, must be kept in the cage.

ADDITIONAL.—MACGILLIVRAY, who confesses that he is indebted to the earlier volumes of *Loudon's Magazine of Natural History* for the information here given, thus remarks upon this bird, which he calls the Striated Woodpecker :—" This species, which is said to be more abundant in the northern parts of Europe than in France and Germany, has not hitherto been met with in Scotland, or even in many parts of England, although it occurs in most of the southern, eastern, and midland counties, extending as far north as Derby, and westward to Shrewsbury

and Hereford. It is said by several observers to be not uncommon in some districts. Thus, Mr. GOULD, in his beautiful *Illustrations of the Birds of Europe*, says, 'In England it is far more abundant than is generally supposed; we have seldom sought for it in vain wherever large trees, particularly the elm, grow in sufficient numbers to invite its abode; its security from sight is to be attributed more to its habit of frequenting the topmost branches than to its rarity.' The Rev. Mr. BREE states, that 'it is by no means of rare occurrence in his neighbourhood, where, however, it is more readily heard than seen. Its loud, rapid, vibratory noise, most extraordinarily loud to be produced by so small an animal, can hardly fail to arrest the attention of the most unobserving ear. Though I have watched the bird during the operation, and within the distance of a few yards, I am quite at a loss to account for the manner in which the noise is produced. It resembles that made by the boring of a large augur through the hardest wood; and hence the country people sometimes call the bird the Pump-borer.' Mr. DOVASTON informs us that it is a very frequent, but uncertain, visitor to the woods near Shrewsbury, never failing in April to astonish him 'with its prodigiously loud *churr* on the ranpikes of trees, which, the atmosphere being favourable, may be heard more than a mile. It much resembles the snorting of a frightened horse, but louder and longer.' He then states that the bird, in performing this sound, 'vibrates its beak against the tree; the motion is so quick as to be invisible, and the head appears in two places at once. It is surprising, and to me wondrously pleasing, to observe the many varieties of tone and pitch in their loud churry, as they change their place on boughs of different vibration, as though they struck on the several bars of a gigantic staccato. When actually boring, they make no noise whatever, but quietly and silently pick out the pieces of decaying wood, which, lying white and scattered beneath on the ground and plants, leads the eye up to their operations above. They have several favourite spots, to which they very frequently return. Their voice is a very feeble squeak, repeated rapidly six or eight times 'ee, ee, ee, ee, ee.' They bore numerous and very deep holes in decayed parts, where they retire to sleep early in the evening; and, though frequently aroused, will freely return. Whatever be the purpose of this enormous noise, they certainly do very nimbly watch, and eagerly pick up the insects they have disturbed by it. They fly in jerks like their congeners, and always alight on the side of a tree.'

61. THE WRYNECK.

Tunx Torquilla, LIN. *Torcal*, BUF. *Der Gemeine Wendehals*, BECS.

Description.—This bird is about the size of a Lark, being six inches and a half in length, of which the tail measures three inches and a quarter. The beak is one third of an inch long, large, straight, pointed, lead-coloured in summer, and in autumn olive green. The iris is brownish yellow; the feet are short, strong, and lead-coloured, having two claws in front, and two behind. The head is ash-coloured, with small spots of black, rust-colour and white. A broad black stripe, mottled with rust-colour, runs from the top of the head half-way down the back. The rest of the upper part of the body is a fine grey, striped and spotted with black, white, and rust-colour; a chestnut-brown stripe runs from the hinder corner of the eye half-way down the neck; while the cheeks, throat, neck, half the breast and vent, are reddish yellow, covered with fine black wavy lines. The lower part of the breast and the belly are yellowish white, with a few three-cornered blackish brown spots. The wing coverts and the hindmost pen feathers are brown, finely striped with grey and black, and covered with black and white spots. The other pen feathers are black, mottled with rust-colour on the outer plume. The tail, which consists of ten larger, and two smaller feathers, is pale grey, spotted with black, and crossed by four broad black stripes.

The female is paler on the belly than the male.

Habitat.—The Wryneck is a bird of passage; leaving us in the first half of September, and returning about the end of April. It frequents groves and gardens, and in August may be particularly noticed in cabbage fields. In some years they are as common in Thuringia as Linnets, though not, like that bird, gregarious.

In confinement this bird does not thrive in a small cage, as it is apt to soil the feathers of the breast and belly by its peculiar motions. It is advisable, therefore, either to put it in a large cage, or allow it to range the room at will.

Food.—It chiefly feeds, in a wild state, on insects and their larvae, which it catches by inserting its long and sharp pointed tongue into the crevices where these are to be found. Ants'

eggs are, however, its favourite food ; and during its passage, when insects are not to be found, it will eat elder-berries.

In confinement, the Wryneck is a delicate bird, and must have ants' eggs mixed with the universal paste, to which it will then soon become accustomed. It will live the longest on Nightingale's food. It is curious to see how it thrusts its long narrow tongue into all chinks and crannies in search of insects ; nor is it possible to give it greater pleasure than by placing ants' eggs in such situations. It takes all food—if not in a liquid state—with its tongue, and shows great dexterity in getting possession of ants' eggs, &c., which may be left near the cage. It is also fond of ants.

Breeding.—The nest, which is built of moss, wool, hair, and grass stalks, is found in hollow trees. The female lays eight or nine shining white eggs. The old ones can be preserved only with difficulty ; but the young may be easily reared on ants' eggs and the universal paste made from the crumbs of wheaten bread.

Mode of Taking.—The Wryneck can in general be caught only by placing limed twigs round the nest ; though, sometimes in the spring, they may even be taken with the hand, while searching the bushes for insects. Two, which I now possess, were brought to me by a boy who had taken them in this manner.

Attractive Qualities.—The peculiar motions whence this bird has derived its name, together with its beautiful plumage, form its chief recommendation to the amateur. It is accustomed to stretch out its neck, and so twist its head round, that the beak points down the middle of the back. It generally sits upright, with its tail spread out like a fan, slowly inclining its body backwards and forwards, and bristling up the feathers of the head and throat. If any one vexes it, or approaches its food box, it leans slowly forward, erects its crest, elongates and twists round its neck, turns the eyes, bows, expands the tail, gobbles in the throat, and throws itself into the most peculiar positions. Its general behaviour is sedate, if not sad. In spring it often cries "*Gui ! Gui ! Gui !*" which is the note by which it calls its mate.

M. von SCHAUROTH informs me that two Wrynecks which he reared, became so exceedingly tame as to hang about his clothes, and to chirp whenever they either heard or saw their

master. One day, being impatient of the ceaseless chirping of one of them, he put it out of the window ; but at night it answered to his call, and allowed itself to be retaken. Even if sitting upon a high tree, the sight of its food box was sufficient to lure it to the window.

ADDITIONAL.—This beautiful summer visitant, which has a remarkable habit of twisting the neck with a slow, undulatory movement, like that of a snake, and turning its head in various directions,—which habit has given occasion for the name Wryneck, or Writheneck, corresponding to *Torquilla* and *Torticollis*—comes to this country regularly a little before the Cuckoo, from which circumstance it has obtained the name of Cuckoo's maid, mate, or messenger. It is sparingly distributed through all the south-east of England, and rarely, if ever, passes the central heights, except as a straggler.

MUDIE says that in its general shape it has some resemblance to the Woodpecker; and it also a little resembles the smallest British one in the markings, though not in the tints of its colours. It is also just a little larger than that bird, though not quite so long in the wings. This author gives a very faithful and animated description of the habits of the bird, for which we must refer our readers to his *History* : he also says that "Wrynecks are very abundant in many parts of Surrey. They are sociable in the early part of the season, and assemble at the call note, 'peup, peup,' by imitating which with a sort of mouth-whistle, the London bird-catchers obtain numbers of them ; they climb in the same style as Woodpeckers, but not so often, though they often leap sportively after each other up the boles of the trees. When a wounded one is taken in the hand, it raises the feathers of the crown, flattens those of the neck, writhes that part slowly like a snake, and occasionally hisses. These birds, if captured, show signs of pugnacity, or perhaps of fear, but their motions are slow and twining. They can be partially tamed, but do not live long in confinement. They usually appear in the southern counties in the first week of April, and retire in October. They are very noisy in the early part of the season, but become silent toward the latter." KNAPP describes the bird as "unusually shy and timid," and says that "when disturbed it escapes by a flight precipitate and awkward, and hides itself from our sight ; and were not its haunts and habits known, we should never conjecture that this bustling fugitive was our long-forgotten spring visitant the Wryneck." YARRELL says that "the Wryneck, when quitting the southern part of the European continent in autumn, goes to North Africa, and the warm parts of Western Asia."

(B) FOREIGN BIRDS.

62. THE TOURAKO.

Cuculus Persa, LIN. *Le Touraco*, BUF. *Der Turako*, BECH.

Description.—This bird, which is about the size of a Magpie, has been placed by some—LINNÆUS, for example—among the Cuckoos, merely because its cry is “*Kuk, kuk;*” although its beak and manner of living sufficiently indicate its true position is quite another class. The beak is short, thick, and shaped like that of a Pigeon; the upper mandible reddish brown, and bent over the lower; the nostrils covered with feathers. The iris is nut-brown, and on the eye-lids are small fleshy warts; the opening of the jaws is wide, extending almost to the ears. The feet, which are adapted for climbing, and the claws, are ash-coloured; the head, neck, throat, top of the back, breast, upper part of the belly, sides, and upper wing coverts, are covered with fine silky feathers of a beautiful dark green. The feathers on the top of the head are gradually elongated into a high three-cornered tuft, tipped with red, which the bird can erect at pleasure. On each side of the head is a black stripe, broadest in the middle of its course, which, taking its origin from the corner of the beak, runs between the eyes to the back of the head. Above and below this is a narrow white line. The lower part of the back, the rump, the upper wing coverts, the scapulars, and the larger coverts, are a blueish purple. The lower part of the belly, the vent, the thighs, and the under tail coverts, are blackish; the large pen feathers are crimson, bordered with black on the outer edge, and at the point; the tail is long and purple.

In some cases white feathers are found intermixed in the green crest.

Attractive Qualities.—This is among the prettiest and tamest of foreign Cage-birds. Its cry is “*Kuk, kuk;*” which syllables it at first utters singly, and then in close and long succession. It neither hops nor climbs, but runs about the room with as much rapidity as a Partridge, and sometimes, with its wings compressed against its body, leaps as far as ten or twelve feet. When its beak is open, the tongue is not visible, and it swallows at once all that is given to it. It is fed on small morsels of fruit and bread; its crop is easily perceptible.

BUFFON says, that one of these birds, which came from the Cape, ate rice; but the one on which I tried the experiment rejected it, though greedily eating grape stones, and pieces of apple, and orange: this seems to shew that fruit is its natural food.

The Tourako is brought from Guinea, but is found in several other parts of Africa.

EUROPEAN BIRDS TAMEABLE WHEN YOUNG.

63. THE KINGFISHER.

Alcedo Ispida, LIN. *Martin-pecheur ou Alcyon*, BUF. *Der Eisvögel*, BECH.

Description.—This very handsome bird, which, however, rarely becomes accustomed to the air and food of the aviary, is seven inches in length, of which the tail measures one inch and a quarter; the feet which are adapted for walking, as the outer is united with the centre claw as far as the first joint, are reddish, and four lines in height. The beak is one inch and a half in length, strong, straight, somewhat compressed at the sides, and pointed; horn-brown outside, and inside saffron-coloured. The iris is dark brown; the top of the head and wing-coverts are dark green; the first being transversely spotted with blue, and the latter covered with egg-shaped spots of the same colour. A broad orange stripe runs from the nostrils to the back of the eyes, and behind the ears is a large white spot. From the lower corner of the beak to the neck runs a broad streak of the same colour as the top of the head; the shoulders and back are bright blue; the throat reddish white; the rest of the lower part of the body is a dirty orange, somewhat lighter on the belly. The pen feathers are blackish, but bluish green on the narrower plume; the tail dark blue on the upper side, and blackish below.

In the female the colours are darker, and the bright blue tinge is supplanted by grass green.

Habitat.—The Kingfisher is a solitary bird, frequenting pools, brooks, and rivers, throughout the year. It perches in winter on a twig or stone, near some hole in the ice, and watches for its prey.

In confinement it neither walks nor hops, but either flies or remains for a long time perched on one spot. On this account



KINGFISHER.

Lanternus

it is well to put a clod of turf, or some green branches in the corner of the aviary, or, perhaps, better still, to keep the bird in a large cage well provided with perches.

Food.—In a wild state the Kingfisher feeds on small fishes, leeches, and various water insects.

When confined it may be fed with fishes, leeches, and earth-worms, till it becomes gradually accustomed to meat. Kingfishers, when taken old, can very rarely be preserved, though I have seen one of this description, which was fed upon dead fish. The fish were thrown in a vessel of considerable size—as the bird overturned all smaller ones—which was placed in his cage. He did not dart upon them from his perch, but bent down gradually till he could reach the vessel with his bill. Old birds, when first kept, will not eat while any one is looking on.

Breeding.—The nest, which is made of roots, and lined with a few feathers, is placed in a hole at the water's edge. The eggs are white, and usually eight in number. Before the young birds can see clearly, they are covered all over with little quills, so as to resemble a hedge-hog. The time to take them out of the nest, is before the feathers begin to grow; and they are to be fed on meat, ants' eggs, meal and earth-worms, till at last they become accustomed to meat alone. They live longer if their food be given to them in a vessel full of water.

Mode of Taking.—They may be caught by affixing a noose to a post, on the spot which they are observed to frequent, and which is generally where the water makes a sort of whirlpool. Limed twigs also often succeed, if they do not immediately overhang the water, into which they might, in that case, drag the bird.

Attractive Qualities.—The beauty and the rarity of this bird constitute its chief recommendation to the amateur. It must be confessed that it is an awkward and obstinate inmate of the aviary.

ADDITIONAL.—Of the Halcyons, or Kingfishers, there are but two species known as British birds, the one being only a straggling visitant, and the other that above described by BRECHSTEIN, a permanent resident, although by no means a common bird. “It is,” says MUDIE, “an inhabitant of holes or burrows on the banks of streams, lives by fishing, and spends much of its time in the air near the waters, or perched on the bushes along the

banks. Its food is not confined to fish, for it also catches dragon-flies and other water insects; and whatever prey it catches, it swallows entire, casting up the indigestible parts in pellets, after the manner of the Owls.

" Its ordinary motion is so rapid, and its colours so bright, that when it passes, it is like a gleam of a broken rainbow, darting along near the surface of the waters. There are few sights in quiet nature more novel and pleasing, or that one wishes more to have repeated, than the first glance one gets of a Kingfisher, darting along some reach of a clear but placid stream, which glides between soft banks, fringed with reeds and bushes. If one is not tolerably well acquainted with it from description, both in its hues and its habits, one is at a loss whether to think it a meteor or a bird. It passes so fast, and the rapid motion of the gay wings gives them so much the appearance of vapour, that it is rather a puzzle; and it is said, and *may* be true, that its rich hues when it hovers, which it often does after the manner of the Hawks, attracts the small fishes to the surface, in the same manner as the lighted torch, in 'burning the water,' attracts the large ones; and while they are, as it were, fascinated, it darts down like an arrow, and makes a certain capture,—though the colours can be seen from below only when the bird twitches round. When seen as it perches on some slender twig, overhanging the water, it has the appearance of the gay flower of some rare and curious water-plant; and the bird, as if conscious of the power of instant escape which is in its wings—which appears to be felt by most birds so furnished—will allow you to approach tolerably near; and if you are quiet, and do not offer violence or make a noise, (for it is silence that the Kingfisher loves more than seclusion), you may see its mode of doing business on the surface of the brook.

" Its flight is rather low, and straightforward, but its eye must be remarkably keen, because it will, in the most rapid flight, halt, hover for a time, and then dart down, seize a little fish, a leech, or even a worm or slug by the bank, and instantly land with it. As it thus not only fishes wholly by the sight, but from the comparative smallnes of its prey, requires to see very clearly, it is only at particular spots, and in particular states of the weather, that its operations can be successfully carried on. The water must be clear, and the surface smooth; and that is the reason why it is not found upon turbulent or brawling streams, or when wind curls, rain dimples, or mud darkens the waters. The days when evaporation has ceased, and a storm is impending, are those on which the atmosphere is most transparent, and the surface of the water most glassy. They are, consequently, the days which, above all others, are fitted for the successful opera-

tions of the Kingfisher, and so are the clear blinks that break out, still warm and shiny, when the weather is unsettled, and the process of evaporation is suspended. These are genuine ‘halcyon days ;’ days on which the Kingfisher is out and active : but the bird has, of course, no more to do with the producing of them, or of the storm which generally follows, than a Lapland witch has to do with the producing of that fair wind which she sells to the credulous mariner ; and if the delivery of which did not often follow the sale, her trade would soon be at an end. Her experience leads her, from present appearances, to infer what is to come next, and therein the certainty of her success depends on the soundness and length of her experience. The Kingfisher, on the other hand, comes on the water, because that and the atmosphere are in a certain state at the time, and the Creator of the bird has made that state the stimulus of the bird’s instinct.”

GOULD observes, that “the young of this bird do not leave the hole until fully fledged and capable of flight; when seated on some neighbouring branch, they may be known by their clamorous twitting, greeting their parents as they pass, from whom they impatiently expect their supplies ; in a short time, however, they commence feeding for themselves, assuming at this early age nearly the adult plumage.” The superstition alluded to by MUDIE, which gives to this bird the power of calming the winds and waves during the period of incubation, is a very old one. Allusions to it are frequent in the ancient poets, and the phrase “Halcyon days,” yet in use, serves constantly to remind us of it. Every schoolboy is acquainted with the story of Ceyx and Alcyone, who, according to OVID, were changed into Kingfishers, and endowed with this supernatural power over the winds and waves.

There was also another fabulous belief attached to this bird, to which SHAKSPEARE and others of our old dramatists allude. It was supposed that the bird, when dead, if carefully balanced and suspended by a single thread, would always turn its beak to that point of the compass from which the wind blew. Thus, Kent, in *King Lear*, speaks of rogues who

“ Turn their Halcyon beaks
With every gale and vary of their masters.”

And MARLOWE, in his *Jew of Malta*, has this—

“ But how now stands the wind ?
Into what quarter peers my Halcyon’s bill ?”

CHARLOTTE SMITH, in her *Natural History of Birds*, says that she has once or twice seen a stuffed bird of this species hung up to the beam of a cottage ceiling, to serve the purpose of an in-

door weathercock, so that this belief can hardly yet have died out.

DR. SAYER informs us that the term Heitre is used to signify the Kingfisher, in the Mythology of Scandinavia ; hence, in his *Descent of Fren*, he makes that goddess, addressing Niord, the Gothic Neptune, say—

“ But soon the jarring thunders cease,
Soon the winged tempests flee ;
Thor on the breezes whispers peace ;
Sunbeams gild the sinking sea ;
O'er its white brim, on calm' wing,
The Heitre played.”

And this reminds us of these quaint, but sweet lines, of our old pastoral poet, WILLIAM BROWNE—

“ Blow, but gently blow, faire winde,
From the forsaken shore,
And be as to the Halcyon kinde,
Till we are ferried o'er.”

T A M E A B L E W H E N O L D.

64. THE NUTHATCH.

Sitta Europaea, LIN. *Sittelli ou le Terchepot*, BUF. *Der Gemeine Kluber*, BECH.

Description.—The Nuthatch is almost as large as a Sky Lark, being six inches and a half in length, of which the tail measures only one inch and a half. The beak is nine lines long, strong, straight, and somewhat compressed at the point. The upper mandible is steel blue, the lower mandible blueish white ; the iris greyish brown ; the feet yellowish grey, and provided with very strong claws. The forehead is blue, but only in the male ; the rest of the upper part of the body, and the wing coverts, are blueish grey. The cheeks and the throat are white ; and a black stripe runs from the root of the beak, between the eyes, to the back. The breast and belly are dark orange ; the feathers of the sides, thighs, and vent, cinnamon brown ; the last mentioned being tipped with yellowish white. The pen feathers are blackish. Of the tail feathers, which are twelve in number, the two in the centre are the colour of the back ; those at the sides are black ; the two exterior ones have a white streak near the point, and are tipped with blueish grey.

Habitat.—This bird frequents oak and beech woods, and seems to prefer the spots where pine and fir trees grow. In such situations it may be observed throughout the year; though in winter it frequently approaches the villages, and flies into barns and stables. The cage in which a Nuthatch is kept must be of wire, as it would very speedily destroy a wooden one.

Food.—In a wild state the Nuthatch feeds upon various species of insects, for which, being an excellent climber, it searches in the cracks and crevices of trees. Beech mast and nuts it generally fixes in a crevice before eating them. In confinement it may be fed on hemp seed and barley meal, and will also eat oats and bread. The oats it has often been seen to fix one by one in the joints of the floor, and always with the thinner end of the grains uppermost, that they might be split with least difficulty. If it be allowed to range the room,—which is inconvenient, on account of its propensity to destroy the wood-work,—it hides a great part of whatever food is given to it.

Breeding.—It builds in hollow trees, and the female lays six or seven white eggs, beautifully spotted with red.

Mode of Taking.—The Nuthatch may be caught in the Tit-trap, if baited with oats and hemp seed, as well as in the barn-floor trap. Its cry is “*Gou ! Dek ! Dek !*”

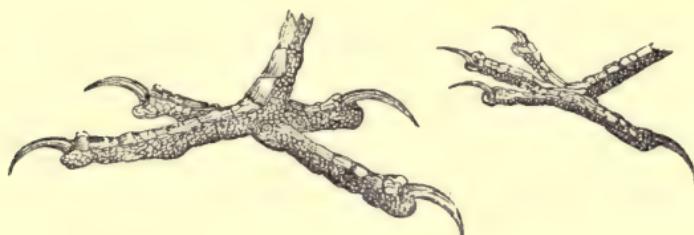
Attractive Qualities.—The beauty of its plumage, its extraordinary cunning in eating and hiding its food, and its general liveliness, form its chief recommendations.

ADDITIONAL.—This beautiful and lively little bird occurs in various parts of England, but chiefly in the southern parts; in Scotland it does not appear to have been hitherto observed. The best description of its peculiarities by a British Naturalist which we have met with, is that furnished by Mr. HARLEY, of Leicester, to MACGILLIVRAY, and quoted by him in his valuable *History*:—“This bird remains with us throughout the year, inhabiting the park and old inclosure more than the hedge-row tree, or the dense umbrageous wood. In fact, I have never seen it upon our hedge-row trees, although I have often sought for it when I have been watching the haunts of the Woodpeckers, which so much resemble it in their habits. In winter, it is not quite mute, but has a small piping note, not unlike that of the Creeper. This is a call-company note, inasmuch as the Nuthatch in winter feeds in little companies, or families, of four or six individuals. On the 21st of

November, 1839, I went after a pair of the Greater Spotted Woodpeckers, and a pair of Nuthatches, in Ganendon Park, near Leicester, the weather being mild, but gloomy, and the wind south. It was not without difficulty that I found the Nuthatches, which invariably feed where the trees are most protected from the wind. Thus, when the south or forest wind is playing upon the park, the Nuthatches are to be found amongst the large oaks and elms on the north side of it; and when a north-easter is blowing, these birds are found feeding on the beeches, chestnuts, and pines, which grow on the south side. I know of no birds whose habits and manners are so operated upon by the movements of the wind. Whether this arises from their being so much exposed to the weather, in consequence of their being almost constantly on the bark of trees at all seasons of the year, I cannot say. The Nuthatch searches the bark like the Creeper, but without deriving aid from its tail, and is able to descend with as much ease as it climbs. You see it now ascending spirally the bole of an oak, then creeping horizontally along an arm, now above, now beneath, and again hanging like a Tit, as it gains the thickened foliage, to examine every crevice of the bark, and the young buds. It proceeds by short leaps, jerks, or notches, and during its progress droops its wings somewhat after the manner of the Hedge Sparrow. At this season (November) it generally keeps towards the middle and topmost branches of the trees it inhabits; but as the spring advances, it not only feeds lower down on the bark, but may then be observed occasionally betaking itself to the ground. The note in spring is quite different, having in the vernal months a soft flute-like sound, which it gets in February, but somewhat earlier or later, according to the nature of the season. The flight of the Nuthatch is very short, and, in fact, is only made from one tree to another, or from branch to branch. When the bird is flying, it moves its wings very rapidly, and during these short flights, its course is not undulating. In its mode of flying it bears a great resemblance to the Wren."

According to MONTAGUE, this bird "chooses the deserted habitation of a Woodpecker in some tree for the place of its nidification. This hole is first contracted by a plaster of clay, leaving only sufficient room for itself to pass in and out. The nest is made of dead leaves, most times that of the oak, which are heaped together without much order. The eggs are six or seven in number, white, spotted with rust colour, so exactly like those of the Great Titmouse in size and markings, that it is impossible to distinguish a difference. If the barrier of plaster at the entrance is destroyed when they have eggs, it is speedily replaced; a peculiar instinct to prevent their nest being destroyed by the Wood-

pecker, and other birds of superior size, who build in the same situation. No persecution will force this little bird from its habitation when sitting ; it defends its nest to the last extremity, strikes the invader with its bill and wings, and makes a hissing noise ; and, after every effort of defence, will suffer itself to be taken in the hand rather than quit."



The above cut will serve to show the difference in structure between the foot of the Woodpecker and that of the Nuthatch ; the former, it will be seen, is *zygodactilic*, or yoked, two of the toes being turned back, and two forward, and the two front ones being joined together at their bases : thus the foot has two bearings in the front and two behind, and the bird is enabled to perch or to walk lengthways on a branch ; and with the feet alternately holding on, and the tail acting as a prop, to walk up the trunk of a tree, or even to move sideways round it. The foot of the Nuthatch is what is called *anisodactilic*, or unequally yoked : at a first glance it seems not to differ much from a common foot, with three toes before, and one behind ; but it is in reality a more curious piece of mechanism, having the power of two feet, and those combined. The middle and exterior toes are united together at their bases, and admit of a position half reversed, or midway between the other two ; the hinder toe is long and strong, and all four of them have strong claws. Thus the foot can adapt itself to any kind of surface, and the bird possessing it can run upon the trunk or branch of a tree in any direction—upward, downward, across, or obliquely.

V. PASSERINE BIRDS.*

THESE birds have a pointed, conical beak, generally strong, and with both mandibles moveable, to fit it for the peeling of grain. The feet, as in the singing birds, are slender and divided. Some eat insects as well as seeds. Those which eat

* *Passeres. Sperlingsartige Vögel, BECH.*

seeds only, feed the young from the crop ; those which eat insects, from the bill. Their nests are generally elaborate, and the female receives but little help from the male in the work of incubation. This and the following group may be said to comprise the *Cage* or *Singing* birds. All birds which eat seeds may be tamed at any period.

ADDITIONAL.—With LINNÆUS, and most of the elder naturalists, the order *Passeres* was a very comprehensive one, including indeed not only the Sparrow and Finch tribes, as above given, but nearly all the smaller kinds of birds, differing as they do very widely in habits and characteristics ; it is, therefore, as a term of distinction, of but little practical utility, nor are the old subdivisions of this order much more satisfactory. The arrangement adopted by BECHSTEIN seems to be entirely arbitrary, and the distinctions between the birds of this and the succeeding section do not seem to be very clearly marked : the term *Conirostres*, conic beaks, used in the quinary system of MR. VIGORS, would perhaps have been better than *Passeres*, a term which, if used at all, should have taken in all the birds of the two sections.

(A) EUROPEAN GROSBEAKS.

65. THE COMMON CROSSBILL.

Loxia Curvirostra, LIN. *Bec croisé*, BUF. *Der Fichten Kreuz schnabel*, BECH.

Description.—This remarkable bird, which is about the size of a Bullfinch, is six inches eight lines long, of which the tail measures two inches and a quarter. The beak is almost one inch long, with this peculiarity, that the upper mandible bending downwards, and the lower mandible upwards, cross each other : hence arises the name of the bird. The upper mandible sometimes crosses on the right, and sometimes on the left side, according to the direction given it when in youth ; it is soft and yielding. The beak is brown, of a lighter hue underneath ; the iris and the feet nut brown ; the shin bones eight lines high.

The changes of colour, which are falsely reported to take place three times a year, are briefly the following :—

The young male, which is greenish brown, with a partial hue of yellow, is, after the first moulting, light red, with the exception of its black quill and tail feathers. This hue is darker on the upper than on the under part of the body. The change generally takes place in April and May ; it is not till the

PLATE 20.



CROSS BILL.

second moulting that these colours pass into the usual greenish yellow. The red Crossbills are therefore the males of one year old ; the greenish yellow the old birds.

The females are either grey all over, with a little green on the head, breast, and rump, or irregularly speckled with the same colours.

An old male then, as may always be observed in the Thuringian Forest, answers to the following description. It is, however, necessary that the birds should be taken from the nest, and not at the season of departure, when no two exactly resemble one another in colour. This arises from the different times at which they have moulted, which, as is well known, has a great influence on the colours of birds.

The forehead, cheeks, and eyebrows are green, or greenish yellow, spotted with white ; the back Siskin green ; the vent white, spotted with grey ; the shank feathers grey. All over the bird, however, the dark grey colour of the feathers shines through the green and yellow, and gives all the parts, especially the back, a spotty appearance. For in reality, all the feathers are grey, and only their points yellow or green. The wings are blackish ; the small wing coverts green ; the two larger rows, as well as the last quill feathers, bordered at the end with whitish yellow. All the quill feathers, however, as well as the black feathers of the tail, have a very narrow border of green.

If the Crossbills are grey or speckled, they are young ; if red, they are one year old, and have just moulted ; if carmine, they are just about to moult for the second time ; if spotted with red and yellow, they are two years old, and in full feather. All these differences may be noticed except at the time of laying ; for as they do not make their nest at any fixed season, so neither is their moulting regular, from which arises the great variety in their appearance.

From all this it follows that the Crossbill has much the same varieties of colour as the Linnet ; and that it is only the red garb, which they wear for a year, which so distinguishes them from other birds.

It is curious that the young ones, which are bred in aviaries in Thuringia in great numbers, never acquire in confinement the red colour, but in the second year either remain grey, or immediately receive the greenish yellow colour of the males who have twice moulted.

Habitat.—In a wild state, the Crossbill inhabits Europe, Northern Asia, and America. It frequents fir and pine woods, but only when there are abundance of the cones.

In confinement it must have a bell-shaped wire cage, of the form and size adapted for a Canary. It may also be allowed to run about, if a pine branch be provided on which it may perch and roost. It cannot, however, be kept in a wooden cage, as it destroys the wood-work with its bill.

Food.—Its food, when wild, chiefly consists of fir seeds, which it partly extracts from the scales of the cones with its bill, and partly collects from the ground. It also eats the seeds of the pine and alder, and the buds and flowers of the sumach.

If kept in a cage, it may be fed on hemp, rape, and fir seeds, or juniper berries. If allowed to run about, it is content with the second universal paste.

Breeding.—Its time of incubation is the most remarkable of its peculiarities, for it breeds between December and April. It builds its nest in the upper branches of coniferous trees, of thin pine or fir twigs, on which is placed a thick layer of earth moss, lined within with the finest coral moss. It is not pitched inside and out with resin, as some have reported. The female lays three to five greyish white eggs, having at the thick end a circle of reddish brown stripes and spots. The heating nature of their food preserves both old and young from the effects of the winter's cold. Like all Grosbeaks, they feed their young with food disgorged from their own crops. They may be reared on bread soaked in milk, and mixed with poppy seed.

Diseases.—The exhalations of a room have a bad effect on these birds, so that they are subject, when in confinement, to sore eyes, and swollen, or ulcerated feet. The country folk of the mountains are simple enough to believe that these birds have the power of attracting their diseases to themselves, and are therefore glad to keep them. A grosser superstition adds to this, that the bird, whose upper mandible crosses on the right of the lower, or, as they call it, a right Crossbill, attracts to itself the diseases of men ; and that a left Crossbill, or one whose upper mandible crosses on the other side, takes away the diseases of women. In some districts, the latter birds are preferred, as having most healing efficacy. Simple people daily drink the water left by these birds in their troughs, as a speci-

fic against epilepsy, to which, as well as to apoplexy, the Cross-bills are subject.

Mode of Taking.—In either Autumn or Spring, they are easy to catch by means of a decoy. A stake, to which strong limed twigs have been attached, is fixed, with the decoy bird at its side, in some forest glade to which the birds are observed to resort. They will certainly be lured to the twigs by the '*gip, gip, gip,*' of the decoy. In some parts of Thuringia, the country-people place spring-traps in the tops of the pines, a favourite haunt of the bird, and hang a good decoy in a cage on the highest branches. As soon as one bird perches, the others follow; and as many are often caught as there are traps, if the sticks on which the birds are to perch, are alone allowed to project.

Attractive Qualities.—The Crossbill is rather a silly bird in a cage, and uses its bill and feet for purposes of locomotion, like the Parrot. If in health, it swings its body up and down like a Siskin, and utters its harsh and unmelodious song. The males, however, are not all alike in this respect, for the amateur prefers those which often utter the ringing note like "*Reitz,*" or "*Kreitz,*" called the Crossbill's crow. It becomes so tame, that it may be carried in the open air on the finger, and accustomed to fly in and out of the house.

ADDITIONAL.—In this country these curious birds appear only as occasional visitants, and that at very irregular periods, and in different parts of the country; "generally confining themselves," says MACGILLIVRAY, "to the fir plantations, in which they find their favourite food." We extract the following from a very interesting account of the manners of this species by J. D. HOY, Esq., of Stoke Nayland, Suffolk, first published in *Loudon's Magazine of Natural History*:—"From October, 1821, to the middle of May, 1822, Crossbills were very numerous in this county, and, I believe, extended their flights into many parts of England. Large flocks frequented some plantations of fir trees in this vicinity, from the beginning of November to the following April. I had almost daily opportunities of watching their movements; and so remarkably tame were they, that, when feeding on fir trees not more than fifteen or twenty feet high, I have often stood in the midst of the flock, unnoticed and unsuspected. I have seen them, hundreds of times, when on the larch, cut the cone from the branch with their beak, and holding it firmly in both claws, as a Hawk would a bird, extract the seeds with the most surprising dexterity and quickness.



"In captivity they were quickly reconciled, and soon became very familiar. As at first I was not aware what food would suit them, I fixed branches of the larch against the sides of the room in which I had confined them, and threw a quantity of the cones on the floor. I found that they not only closely searched the cones on the branches, but in a few days not one was left in the room that had not been pried into. I gave them canary and hemp seed; but, thinking the cones were both amusement and employment, I continued to furnish them with a plentiful supply. I had about four dozen of them; and frequently, whilst I have been in the room, they would fly down, seize a cone with their beak, carry it to a perch, quickly transfer it to their claws, and in a very short time empty it of its seeds, as I have very many times witnessed, to my surprise and amusement. As the spring advanced, the male birds in the plantations were frequently singing on the tops of the firs, in low but very agreeable notes, yet they continued in flocks, and were seen in some parts of the country until the beginning of June. I had hopes of their breeding in confinement, and I accordingly kept them in different rooms, fixing the tops of young fir trees on the floor, and against the walls, and supplying them with as great a variety of food as possible; but all to no purpose, as neither those I had confined in this manner, nor those in cages, ever showed any inclination to breed."

Several records of the appearance of flocks of these rare birds in England at different dates have been preserved. One of these, of which a copy was sent by a clergyman residing near Maidstone to Mr. YARRELL, and by him published, states thus:—"The yeere 1593 was a great and exceeding yeere of apples; and there were greate plenty of strang birds, that shewed themselves at the time the apples were full rype, who fedde uppen the kernells onely of those apples, and haveinge a bill with one beake wrythinge over the other, which would presently bore a greate hole in the apple, and make way to the kernells: they were of the bignesse of a Bullfinch, the henne right like the henne of the Bullfinch in coulour; the cock a very glorious bird, in a manner al redde or yellowe on the brest, backe, and head. * * * *

'They came when the apples were rype, and went away when the apples were cleane fallen. They were good meate.'

According to a note in the last edition of BEWICK, it would appear that Crossbills did not confine their visit to the county of Kent in this year 1593: they are there mentioned as also numerous elsewhere.

In a rare work, entitled *Britannia Baconica, or the Natural Rarities of England, Scotland, and Wales*, it is stated that "in Queen Elizabeth's time a flock of birds came into Cornwall about harvest, a little bigger than a Sparrow, which had bil-

thwarted crosswise at the end, and with these they would eat an apple or two at one snap, eating only the kernels: and they made a great spoil among the apples."

Most observers have noticed the readiness with which this bird suffers itself to be stricken down, or caught. YARRELL states that, in 1791, a bird-catcher at Bath caught one hundred pairs, which he generally sold for five shillings each. Many subsequent years have also been remarkable for the visits of these apple-destroyers in considerable numbers. It has been questioned whether they breed in this country; KNAPP believes that they do, and the Editor of the last edition of PENNANT's *Zoology* mentions one certain instance, which occurred in a pine tree within two miles of Dartford, Kent. Many interesting particulars of this bird, by Sir W. JARDINE and others, will be found in WHITE's *Selborne*, Bohn's edition.

66. THE FIR GROSBEAK, OR PARROT CROSSBILL.

Loxia Pytiopsittacus, BECH. *Loxia Curvirostra major*, LIN. *Der Kiefern Kreuzschnabel*, BECH.

Description.—This bird is by many considered to be identical with the last, an error into which I myself fell, until I kept them in the same room, and had an opportunity of accurately comparing them. It is about the size of a common Grosbeak, being about eight inches and a quarter in length, of which the tail measures two inches and three-quarters. From tip to tip of the expanded wings measures thirteen inches and a half; the beak is one inch long, blackish, very thick, and bent crosswise at the point, yet not so far as to permit of the lower mandible reaching over the upper. The beak generally is thicker, and its point shorter and more obtuse, than in the preceding species. The feet are three-quarters of an inch in height, and the middle claw one inch and a quarter long; the head and body of this bird are also thicker than those of the preceding. The general hue of most males which I have seen, is vermillion mixed with brown, and varying in shade on different parts of the body. The neck, breast, and rump, are a purer red; the pen and tail feathers dark grey, with black shafts. This bird also, like some others, appears to vary in colour according to its age. I once possessed an olive green one, which sang excellently, and was therefore, in all probability, an old male.

The female is dark grey, tinged on the back with olive green; the rump is a lighter green; the belly and vent whitish.

Observations.—This bird is found in Germany wherever there are woods of Scotch fir. If not seen in summer, the traces which they leave behind them in winter, in the fir cones lying stripped of their seeds beneath the trees, are unmistakeable. They sit very still, and eat nearly the whole day; and only when hopping from tree to tree do they utter a loud harsh call, not unlike that of the species last described, “*Gep, gep, gep!*” They are generally seen in parties of from twelve to twenty-four. They are not at all shy, nor will a flock of them disperse even if fired at. They prefer the highest trees, and are caught in the same manner as the Common Crossbill. When wild, they feed, so far as I know, only on the seeds contained in the fir-cones. In confinement they may be supplied with the same, but will eat hemp, rape seed, the second universal paste, or, indeed, anything that comes to table. They must not be allowed to range the room, as they have a habit of gnawing books, shoes, &c. A couple once in my possession destroyed in this manner a pair of new shoes in one day.

The males are very constant singers; their song is like that of the Common Crossbill, but deeper and more interrupted. They are very sociable, even with birds of other species; and if a pair be kept, they will caress, feed, and follow one another about. They become so tame as to allow themselves to be taken hold of, but their continual cries often make them disagreeable.

I have never succeeded in finding the nest of this bird. I am told, however, that it builds on the tops of very high firs, and hatches its brood of four or five, not in winter, like the Crossbill, but in May.

ADDITIONAL.—PENNANT appears to be the first naturalist who gives this bird a place in our native fauna, and he only speaks of two specimens, a male and a female, taken in Shropshire, the bills of which, he says, “were remarkably thick and short, more incurvated than that of the common bird, and the ends more blunt.” Since the date of this short notice, 1776, but few specimens have been taken in this country, although the skins of the bird are frequently, says YARRELL, brought over by the German dealers. TEMMINCK states that the bird is only an occasional

visitant either in Holland or France, but an inhabitant of Germany and the parts of the European continent further north. MACGILLIVRAY gives the admeasurement of a large example of the species as follows:—"Length to the end of the tail eight inches; wing from flexure, four inches three-twelfths."

We have another species of Crossbills not mentioned by BECHSTEIN, called the White-winged Crossbill (*Loxia falcirostra*, PENN.), said to be identical with the North American variety (*L. leucoptera*), described by AUDUBON, BONAPARTE, and RICHARDSON as not uncommon in the Western continent, and alluded to by GLOGER, NILSSON, BREHM, and other European naturalists, who speak of it as very rare. In this country not more than four or five specimens appear to have been taken. The whole length of this bird is stated to be about six inches.

67. THE PINE GROSBEAK.

Loxia Enucleator, LIN. *Darbec ou Grosbec de Canada*, BUF. *Der Haken Kreuzschnabel oder Fichten Kernbeisser*, BECH.

Description.—This bird resembles the other Grosbeaks in form and habit of life, except that the lower does not cross over the upper mandible. The latter, however, is provided with a large hook or claw. This is the largest of the German Grosbeaks; being about the size of the Bohemian Chatterer, eight inches and a half long, of which the tail measures three inches. The beak is six lines long, short and thick; the upper mandible being dark brown in colour, and bent so as to cross the lower considerably. The feet are one inch in height, and blackish brown. The head, neck, breast, and rump, are a light carmine, tinged with blue. From the nostrils, which are covered with dark brown feathers, a black line runs as far as the eyes. The feathers of the back, and upper wing coverts, are black, edged with red; the larger wing coverts are similar, but in addition tipped with white, which produces two transverse stripes upon the wings. The pen feathers are black; the larger ones edged with grey, the shorter being white on the outer margin only. The belly and vent are ash-coloured; the tail is somewhat forked, and marked like the pen feathers.

The prevailing colour of the female is greyish green, tinged here and there, especially on the top of the head, with pale red or yellow.

Whether in a wild state the plumage of this bird changes its colour, as is the case with the last-mentioned species, is

uncertain; but that in the aviary this is the case, has been proved by experience. Not only after, but also immediately before the first moulting, the colour is a decided reddish yellow. This change commences at the beak, and proceeds down the back to the breast, till all that was red has become yellow. The yellow colour is somewhat darker than the citron yellow; and all the feathers, whether red or yellow, are ashen grey on the under side, and at the root.

Observations.—This bird is a native of the northern regions of Europe, Asia, and America; and is therefore found in Mechlenburgh and Pomerania, though rarely in more southern parts of Germany. It frequents the pine and fir woods, and lives on the seeds of coniferous trees. It may be reckoned among birds of passage, as in winter it migrates in search of berries. It builds its nest in lofty trees; the young birds are at first brown, with a tinge of yellow; and for the first year the red colour of the males is much lighter than it is afterwards. In autumn and winter these birds may be caught with a noose, baited with juniper or other berries; and are so stupid, that in the north they are often taken with a brass ring attached to the end of a pole, and provided with one or two horse-hair nooses. This is simply thrown over the head of the bird. They are often caught and kept in confinement on account of their great tameness and agreeable song. They then sing not only by night, but throughout the year; whereas, in a wild state, their song is heard only between the spring months and August.

ADDITIONAL.—**MACGILLIVRAY** calls this bird the Pine, or Greater Bullfinch, and says it is the largest of our Passerine species, bearing in colour a strong resemblance to the Common Crossbill, which it resembles in its habits, haunts, and mode of life. In form it presents nothing that essentially differs from the common Bullfinch. **PENNANT** appears to be the only British naturalist who has described the bird from actual observation; and from seeing them flying about in the great forest of Invercauld, Aberdeenshire, as early as the fifth of August, he was led to suppose that they had bred there. **SELBY**, however, observes that such a conclusion ought scarcely to be inferred from this fact, as a sufficient interval of time had elapsed for these individuals to have emigrated from Norway, or other northern countries, to Scotland, after incubation, as they are known to breed as early as May in their native haunts. “I have made,” he adds, “many



Stewart delt

Linn.

BULLFINCH.

enquiries respecting these birds, during excursions in Scotland, but cannot learn that the nest has ever been found ; and indeed, from the intelligence obtained from gamekeepers, and those most likely to have made observations connected with ornithology, it appears that they are very rarely seen, and can only be regarded as occasional visitants."

68. THE BULLFINCH.

Loxia Pyrrhula, LIN. *Bouvreuil*, BUF. *Der Gimpel oder Dohmpfaffe*, BECH.

Description.—This favourite bird is, like most of the species to which it belongs, somewhat thick in proportion to its length, which is six inches and three quarters, of which the tail measures two and three quarters. The beak is half an inch long, black, short, and thick ; the iris is chestnut brown ; the feet weak and black ; the shanks eight lines high. The top of the head, the circle round the beak, the chin, and the upper part of the throat are a shining velvety black. The throat, back, and shoulders are dark grey ; the rump beautifully white ; the breast and the upper part of the belly a beautiful crimson, which grows darker as the bird advances in age. The remaining portion of the lower part of the body is white. The pen feathers are blackish, and darker in proportion as they are near the body ; the hindmost being externally bordered with steel blue, and the last having the outer plume red. The larger wing coverts are a glittering black, tipped with reddish grey ; the centre, an ashen grey ; the lesser blackish grey, edged with red. The tail is somewhat forked, and steel blue, shining with a black lustre.

The female may be distinguished from the male, by the fact that she is smaller ; that the red portions of her plumage are strongly tinged with grey ; that the back is brownish grey ; and the feet lighter in colour.

There are some singular varieties of this species, which, however, are chiefly found in the aviary :—

1. The White Bullfinch ; which is greyish white, or quite white, with a few dark spots upon the back.
2. The Black Bullfinch. These are usually females, which have been kept when young in a dark place ; or have acquired the colour in old age, by being fed too exclusively on hempseed. Some, at moulting, resume their original colours, others remain

black. The black itself, however, varies very much in different individuals. Some are a shining coal-black all over the body; others, only a smoky black, which is lighter on the belly; others, again, have the brighter colour on the head, and the duskier on the other parts of the body. Some black Bullfinches are slightly marked with red on the belly; others have the belly entirely red; and I have seen one in which, though the head as far as the breast was black, and the rest of the body a dusky smoke colour, the wings and tail were white. It was a female; a very handsome bird, and somewhat larger than the Redbreast.

3. The Speckled Bullfinch, so called, because whether the prevailing colour be black or white, it is covered with white and grey spots.

4. The Hybrid Bullfinch; the offspring of a young female Bullfinch and a Canary-bird, inherits the form and plumage of both parents, and sings delightfully, though not so loudly as a good Canary-bird. It is, however, very rare, as it is difficult to rear such broods. The male Canary-bird selected for such a purpose, must be both very ardent and very attentive to its young. Other varieties, regarded by some as separate species, are the Large Bullfinch, which is about the size of a Thrush, and the Middling or Common Bullfinch, as large as a Chaffinch. As for a third variety, the Small Bullfinch, said to be still less than a Chaffinch, I believe the idea to originate in merely an accidental variation of size. This I can assert with the more certainty, as I have been in the habit of inspecting every year several hundreds of these birds, both wild and tame. I have seen individuals as small as a Redbreast, and others as large as a Crossbill, which have come from the same nest.

Habitat.—The Bullfinch is common all over Europe, even as far north as Sweden and Russia. In Germany it may be seen generally in pairs, in all woody districts. In winter it migrates in search of berries.

When first taken, the Bullfinch may be allowed to range the room with other birds, except some particular reason exist why it should be confined in a cage. The shape and size of this are of no consequence, as it is a quiet bird, and thrives under all circumstances. It is, however, usual to put those which have been taught, in a handsome cage of brass wire, and in a room by themselves, as their artificial song might spoil that of other birds, if within hearing.

Food.—It feeds, when wild, on the seeds of the pine, fir, ash, maple, beech, and all kinds of berries, as well as on the buds of the red beech, the various kinds of maple, oaks, and pears. It will also eat linseed, millet, rape, nettle, and grass seed.

In confinement, those allowed to run about, may be fed with the usual universal paste, and a little rape seed, by way of variety. Those which are kept in a cage, however, must have rape and hemp seed, with occasionally a little plain biscuit. Rape seed soaked in water, without any hemp seed, increases their longevity, as the latter is too heating, and often ends by making them blind, or inducing decline. They occasionally require a little green food also; as for instance, a few water-cresses, a piece of apple, some savin, service berries, or a lettuce.

Breeding.—The Bullfinch is an exceedingly affectionate bird; very averse, both when wild and confined, to being separated from his mate; and when with her, continually caressing and calling to her. The female frequently lays without contact with the male; and if the requisite aid be afforded, will sit like the Canary, though the eggs are rarely fruitful. In a wild state the Bullfinch breeds twice a year; generally concealing its nest as much as possible in fir-trees or hedges. The nest is badly built of twigs, and lined with moss. The female lays from two to six eggs, of a blueish white, with a circle of violet and brown spots at the large end. The young birds are hatched in a fortnight. If they are to be taught to whistle, they must be taken out of the nest when half fledged, *i. e.* when twelve to fourteen days old, and fed on soaked rape seed, mixed with wheaten bread, or buckwheat meal softened in milk. The prevailing colour of their plumage is a dirty dark ash colour, with dark brown wings and tail. The males may be distinguished by a slight red tinge upon their breast, and may even be selected from the nest, as the females, though they learn to whistle, are neither so beautiful or so docile. They do not begin to whistle till they are able to feed themselves; but must nevertheless be whistled to, as soon as taken, as in this case the lesson is more deeply and readily impressed upon their memory. It is also necessary to remark, that, as is the case with Parrots, they are most attentive, and most capable of learning, immediately after they have been fed. The course of instruction must last at least

three quarters of a year; for if of less duration, they will either confuse their different airs, learn false notes, transpose passages, or, perhaps, altogether forget their lesson at the first moulting. Even when they have been taught, it is as well to keep them apart from other birds, as they are so quick at learning, as readily to catch up any novelty. It is also necessary to help them when they hesitate, and to repeat their song to them, especially at moulting time; else there is danger of having an imperfect performer, which is the mere provoking, as a good Bullfinch is very valuable.

Diseases.—Bullfinches which have been taken when old—that is, which have not been taught any artificial song—live eight years or more in confinement, and are rarely ill. Those, on the contrary, which have been reared from the nest, seldom live more than six years, and are subject to many diseases, probably because accustomed in youth to unnatural food, or because fed, as favourites, with unwholesome dainties. They live longest, and enjoy the best health, if never fed either with sugar or cakes; but only rape seed, with which a little hemp seed is occasionally mixed as a treat. The green food which is mentioned above, as well as the river sand with which the bottom of the cage should be strewed, materially aid in the process of digestion.

The diseases by which they are often attacked are the following:—costiveness, diarrhoea, epilepsy, grief and melancholy,—in which case they must be fed only on rape seed soaked in water,—and the moulting disease. A rusty nail in their water, together with good food, and ants' eggs, if they have been accustomed to them when young, are specifics against the last-mentioned ailment.

Mode of Taking.—There are few birds more easily attracted by the decoy than the Bullfinch. They may not only be taken in the usual manner, but in that described under the head “Crossbill,” and even by setting limed twigs upon a bush, to which the decoy bird is fastened. In winter they may frequently be caught in a snare, if baited with service or sumach berries. In spring or autumn the same bait will often lure them to the trap, especially if the fowler imitates their gentle cry of “*Tui, Tui!*”

Attractive Qualities.—The Bullfinch is a very docile bird; and although the natural song of both sexes is harsh and dis-

agreeable,—resembling the creaking of a door or wheel-barrow,—they may be trained, as in Hesse, Fulda, England, and Holland, to whistle many airs and songs in a soft, pure, flute-like tone, which is highly prized by amateurs. The bird is generally capable of retaining in its memory three different tunes. It is found that they are best instructed by means of a flute, or by the whistling of the teacher. They are usually very tame, sing at command, make many very elegant gestures, moving now the body, and now the tail, to the right and left, and spreading out the latter like a fan. To obtain the perfection of whistling, a bird should only be taught one air, together with the usual short flourish or prelude. The Bullfinch will also imitate the song of other birds, though the amateur generally endeavours to prevent its having the opportunity of so doing.

The education of the Bullfinch affords another proof that animals are endowed with various measures of capability; one bird learns soon and easily, another with great difficulty; one acquires several tunes in succession, another occupies nine months in learning one. It has been remarked, however, that the slow learners do not, in the moulting season, so quickly lose what they have acquired.

Bullfinches which have been caught when old, are prized not only for their beauty, but for their extraordinary tameness. Like the Siskin and Redpole, they perch upon and eat from their owner's hand, will take saliva from his mouth, and allow themselves to be handled as if they had never known liberty. The usual mode of effecting this is as follows:—A fresh-caught Bullfinch is allowed to feed himself in his cage for one day, as experience shows that these birds are willing to eat as soon as ever they are freed from the limed twigs. A band is then prepared, such as fowlers put round the wings of a decoy bird, with which, and a thread one foot in length, the Bullfinch is so fastened, that he can neither fall down, nor beat himself to death. His food is then put into a little bag, to which is attached a small bell, and his water poured into a similar vessel. At first, when these are offered him, the chained bird will neither eat nor drink. It is then as well to leave the vessels with him for a day or two, and allow him to help himself, yet approaching whenever he is seen to eat. On the third day he will be seen to spring to his food whenever

offered ; and the bell must be rung as long as he is eating. When he has had enough, he must be carried about on the hand ; upon which, as he finds he cannot get loose, he will at last begin to eat quietly. On the third or fourth day he will probably of his own accord fly to the hand in which the seed bag is ; he must then be let go, and will be found to follow the hand, however far it is withdrawn. Should he take the opportunity of flying away, he must again be bound, and left without food for several hours. In this manner, the Bullfinch may be tamed in the course of a few days, and be taught to fly to the hand whenever he hears the bell. To complete the process, it is now necessary only to make the aperture of his seed vessel somewhat narrow, so as to force him to open it ; or perhaps to give him only rape seed in the cage, and reserve the hemp seed for the hand. He will also learn to drink from the mouth, if kept without water for half a day. A bird thus trained, might easily be taught to fly in and out ; though in this case, the neighbourhood of a forest would be dangerous. A sure method, in such a case, to lead the wanderer back, would be to place his mate, with her wings clipped, in a cage before the window of the room to which he is desired to return.

ADDITIONAL.—The gardeners in this country call the Bullfinch “ Pick-a-bud,” in reference to a well-known mischievous habit which it has : it is, in truth, a sad depredator, although not, as KNAPP contends, without any redeeming virtues ; there is no doubt that a large proportion of the buds of the cherry and other fruit trees which it destroys have a worm at the core, which would prevent the fulfilment of their promise to yield fruit in due season. NEVILLE Wood, in his *Ornithologist's Text Book*, expresses a decided opinion, founded, he says, upon close observation, that the whole of the buds which the bird destroys contain grubs, which only are eaten, the vegetable envelope being rejected. Whether this is really so we cannot say, much difference of opinion prevailing on the subject, even among those who ought to be best informed.

Besides the name above mentioned, the Bullfinch is variously called the Coal-hood, Red-hoop, Tony-hoop, Alp, Pope, and Nope, most of the names having reference to the distinctive marks of the plumage. It is generally distributed throughout Britain, occurring in most of the wooded and cultivated districts, although not very common any where ; and from its shy habits, and the low unobtrusive nature of its wild melody, few persons

are aware of its presence even in those localities which it best loves to frequent.

With us the Bullfinch breeds late, the nest not being begun till the end of April or beginning of June. "The male bird," says MUDIE, "sings at the time; but his song is so low, that it is not heard but in the close vicinity; and the bird is so apt to drop into the bush and be silent on the least alarm, that to scramble through the trees in order to hear the native note of the Bullfinch, is almost the surest way of being disappointed." BOLTON, in his *Harmonia Ruralis*, describes the female as "building her nest in woods, particularly where sloe-bushes and crab-trees abound. For the ground-work she makes use of a number of small sticks, broken of proportionate lengths. These she places crosswise on the divisions of a suitable branch, and upon these the nest is built of woody roots, the largest near the bottom and round the sides, the smaller within. The inside, or lining, is made of very fine fibres of roots, without any other materials. The diameter of the cavity is upwards of two inches and a half, the depth an inch."

This author recommends that "those who would bring up Bullfinches from the nest, with a view to teach them to whistle, or to imitate the song of other birds, should take them about four days old; for if they are left to the age of ten or twelve days (as BECHSTEIN recommends), they acquire some of the harsh notes of the parent, which they will never quit."

A great number of piping Bullfinches are annually sent to this country for sale by the German dealers, who cultivate to the highest degree the imitative powers which these birds possess; the facility with which they acquire the various tunes and tricks included in their course of instruction, is, indeed, astonishing, and the power of memory which enables them to retain and repeat the latter through a course of years equally so. DR. STANLEY gives the following account of the manner in which their training is conducted:—

"No school can be more diligently attended by its master, and no scholars more effectually trained to their own calling, than a seminary of Bullfinches. As a general rule, they are formed into classes of about six in each, and kept in a dark room, where food and music are administered at the same time; so that when the meal is ended, if the birds feel disposed to tune up, they are naturally inclined to copy the sounds which are so familiar to them. As soon as they begin to imitate a few notes, the light is admitted into the room, which still further exhilarates their spirits, and inclines them to sing. In some establishments the starving system is adopted, and the birds are not allowed food or

light until they sing. When they have been under this course of instruction in classes for some time, they are committed singly to the care of boys, whose sole business is to go on with their education. Each boy assiduously plays his organ from morning till night, for the instruction of the bird committed to his care, while the class-teacher goes his regular rounds, superintending the progress of his feathered pupils, and scolding or rewarding them in a manner which they perfectly understand, and strictly in accordance with the attention or the disregard they have shown to the instructions of the monitor. This round of teaching goes on uninterruptedly for no less a period than nine months, by which time the bird has acquired firmness, and is less likely to forget or spoil the air by leaving out passages, or giving them in the wrong place. At the time of moulting, the best instructed birds are liable to lose the recollection of their tunes, and therefore require to have them frequently repeated at that time, otherwise all the previous labour will have been thrown away. There are celebrated schools for these birds at Hesse and Fulda, from whence all Germany, Holland, and England, receive supplies of the little musicians. In some cases the birds have been taught to whistle three different airs, without spoiling or confusing them; but in general a simple air, with perhaps a little prelude, is as much as they can remember."

69. THE GREENFINCH, OR GREEN BIRD.

Loxia Chloris, LIN. *Grosbec Verdier*, BUF. *Der Grünling*, BECH.

Description.—This bird, which is somewhat longer than a common Chaffinch, is six inches long, of which the tail measures two inches and a half. The beak is five lines long, flesh-coloured, darker above than below, and light brown in winter. The iris is dark brown; the feet flesh-coloured, tinged with blue, and eight lines high. The general colour is yellowish green; on the under part of the body a lighter or Siskin green, which is lightest at the rump and belly, and on the latter tinged with white. The quill feathers are blackish, bordered with yellow; the four outside tail feathers yellow from the middle to the root, but else black with a white border.

The female is smaller, and easily distinguished from the male, by having the upper part of the body of a browner green, and the lower part more ashen grey than yellowish green. There are some yellow spots on the breast and the belly, and the under tail coverts are rather white than yellow.

Sportsmen and birdcatchers distinguish three kinds of Green-

finches:—1. The Great Greenfinch, the prevailing colour of which is a beautiful yellow. 2. The Middle-sized Greenfinch, which is light yellow, especially on the under part of the body. And, 3. The Smallest, which is more green than yellow. But the true distinction lies in the age of the birds, according to which the body is larger or smaller, and the plumage more or less brilliant. A more remarkable bird is the Bastard Greenfinch, the offspring of a male Greenfinch and a female Canary-bird, which is always green and grey, whatever the colour of the mother; this is in no case a good singer.

Habitat.—The Greenfinch is to be found all over the continent of Europe, though less common towards the north. In Germany it is one of the commonest birds. It may be observed in summer in thickets, gardens, and wherever there are willow trees; but in winter, migrates in large flocks, and does not return until March.

In forest districts this is a favourite Cage-bird, and is usually kept in a bell-shaped, or four-sided cage. It cannot be allowed to run about, or to inhabit an aviary with other birds, except if well supplied with food; for it is so fond of biting, and guards the access to the food drawer with its beak so effectually, that other birds have no choice but to yield the point or be deprived of their feathers. Otherwise this bird is as quiet and tame in confinement, as it is shy and wild in a state of liberty.

Food.—When wild, it feeds on all kinds of seeds; hemp and rape seed, linseed, juniper berries, spurge laurel berries, unripe barley, turnip, thistle, and lettuce seed. It is especially fond of the seeds of the milk thistle, which almost all other birds dislike.

In confinement, if allowed to run up and down the room, it thrives admirably on the second universal paste; especially if a little rape or hemp seed be occasionally given to it. In the cage it needs only rape seed, with a little hemp seed after moulting, to make it sing. To keep it well, some green meat is now and then necessary; lettuce, chickweed, cabbage, or juniper berries.

Breeding.—The Greenfinch generally attaches its nest to a thick branch of a tree, though it is sometimes found in a thick hedge, or on the top of an old willow tree. It is well built of wool, coral moss, &c., and lined with fine root-fibres and hair. The female lays twice a year four or five eggs, pointed at the ends, and silvery grey, spotted with violet or brown. At first

the young are greenish grey, although the male may from the first be distinguished by a somewhat yellow tinge. They may be reared from the nest, and will learn, though with some difficulty, very various songs from other Cage-birds. As they sing throughout the year, it is advisable to let them learn from a bird whose song is agreeable, *e. g.* the Chaffinch. What they have once learned, they never forget.

Diseases.—They have a better constitution than most Cage-birds, and do not often fall ill. They may be kept twelve years.

Mode of Taking.—By means of a decoy, these birds may be caught even as late as December on the area traps. In spring they may be taken on the lure bush with decoy birds. Their call while on the wing is “*Yek, yek!*” and when perched, “*Schvoing!*” They may also be lured by Linnets. When taken, they may easily be induced to eat, by throwing a little crushed hemp seed on the floor of the cage.

Attractive Qualities.—Although their natural song has no great recommendation, it is not unpleasant; so that some persons, with whom, however, I cannot agree, even prefer it to the Linnet’s. Their tameness, which is as remarkable as that of the Bullfinch, renders them the most agreeable birds for the room. They *may* not only be accustomed to flying in and out, but even to breeding, either in a room which lies near a garden or grove, or in a *summer*-house. To accomplish this, the following process is necessary: The young ones are to be taken out of the nest, and placed, covered with a Titmouse trap, in a hole at the foot of the same tree. By this means the old birds, when they come to feed the nestlings, are caught. Old and young are then put together in a large cage, and kept till the latter are half fledged. The window is then opened for them to go out; the desire of trying their wings prompts them to a short excursion, and hunger soon drives them back. The first time they are let fly, the old birds may be placed before the window, to lure them back. When once accustomed to their owner, they will never fly away; but if this be not the case, they may be kept in till winter, and the window opened to them for the first time when it is snowing. If they fly out, they may be lured back by another bird of the same species, put before the window in a cage. If a still safer method be desired, such preparations may be made at the window as to allow of females, with clipped wings, going in and out. They sit

freely in the company of Canaries; and as they are good sitters, Canaries' eggs are often put under them.

Like Goldfinches and Siskins, they may be accustomed to drawing up their own water.

ADDITIONAL.—This bird, which is nearly allied to the Grosbeaks in many respects, is called by some naturalists the Green Grosbeak; it is generally distributed over the cultivated parts of England, Ireland, and Scotland, where it is a permanent resident, only changing the ground occasionally, to obtain a sheltered situation in severe weather. It is said, by NEVILLE WOOD, to be a late breeder, the first eggs being laid about the middle of May; SELBY says at the end of that month; and WOOD continues: "It pays remarkable attention to its progeny; and though it never attempts to lead the intruder from its nest, the parents make the most unceasing wailings when any one is near, or when the young are carried off, sometimes fluttering close to your head, and endeavouring to annoy you in every possible way. The young do not quit the cradle until fairly fledged, and often dart out simultaneously when any one approaches. They are mostly fed on green caterpillars and small insects, of which the species destroy immense numbers at this period. It would appear that authors are wholly unaware of its insectivorous habits; and in PARTINGTON's *Cyclopaedia of Natural History*, it is expressly stated, that the young of the Green Grosbeak are fed entirely on seeds, which is quite a mistake." This author has noticed that in the flocks of these birds which collect at the commencement of winter, out of twenty or thirty birds, only one will be a male; and infers from this, that the sexes separate at the inclement season, and that the males either quit the country or make a partial migration.

70. THE HAWFINCH.

Loxia Coccothraustes, LIN. *Grosbec, BUF. Der Gemene Kernbeisser*, BECH.

Description.—Only a passionate lover of birds would wish to keep this species. It is seven inches long, of which the tail measures two inches and one-third. Its beak is round, blunt, conical, and, in proportion to its body, thick; in summer it is dark blue, in winter blackish at the point, but otherwise flesh-coloured. The iris is light grey; the feet are nine lines high, slender, and flesh-coloured. The top of the head, the cheeks, and the tail coverts, are a light chestnut, inclining to a yellowish brown on the forehead; the nape of the neck is a beautiful ashen grey; the circle of the head is black, forming a square black spot on

the throat ; the back is dark brown, changing into grey on the rump ; the belly a dusky flesh-colour, which at the vent becomes white. The smaller wing coverts are black ; the larger, white in front and brown behind, which produces a white spot on the wings. The pen feathers are black, tipped with steel-blue ; the foremost have a large white speck on the inner plume ; the hinder are so blunt at the tips as to give the appearance of having been clipped. The tail is black, but the two centre feathers incline to ashen grey at the ends, and the points of the outermost are white half-way up the inner plume.

In the female the head, cheeks, and upper tail coverts are reddish grey ; the black of the throat, wings, and tail, is tinged with brown ; the white spot on the wings is light grey, and the lower part of the body is reddish grey, inclining to white on the belly.

Habitat.—It inhabits the temperate portions of Europe and Russia, and is very common in many parts of Germany, especially on mountains overgrown with red-beeches. It can hardly be considered a bird of passage, as it returns home as early as March.

In confinement it is usually placed in a bell-shaped wire cage, when it soon becomes tame. It may also be allowed to range the room, if it have not too many companions and too abundant a supply of food, in which case it is very quarrelsome.

Food.—Besides the seeds of the beech, juniper, ash, and maple, and the berries of the service tree and white thorn, the Hawfinch is fond of cherries, the stones of which it easily splits with its powerful beak, in order to get at the kernel. It also eats sloes, linseed, hemp, cabbage, radish and lettuce seed.

In confinement it may be fed with rape and hemp seed, and, if allowed to range the room, with the second universal paste.

Breeding.—The nest is found in beech woods, or trees, or high bushes, and on fruit trees in gardens. It is well built of small twigs, and lined with very fine roots. The female lays three to five eggs twice a year ; these are greenish ashen grey, speckled with brown, and striped with dark blue. In wooded districts these birds are often reared from the nest, and become so tame as to follow their master, and protect him with their strong beak against dogs and cats. Like the Bullfinch, they may be accustomed to come and go at the word of command.

Mode of Taking.—These birds eagerly follow the lure, and are therefore in autumn easily caught in the barn-floor trap, if baited with hemp seed, juniper and service berries. In winter service berries will entice them into the snare, and they may be caught on the nest with limed twigs. They eat as soon as taken, if hemp and rape-seed be offered them.

Attractive Qualities.—These are not very numerous. I myself have no liking for the birds, and am especially averse to their unpleasant call, “*Itz! tziss!*” which never ceases. Their song consists of a low whistle, with occasional clear piercing notes, “*Irrr!*” For some bird-fanciers this may be enough; yet to most their great tameness will be their chief recommendation.

ADDITIONAL.—This is the Hawfinch of most British naturalists; it is the largest bird of the genus that appears in these islands, in the southern parts only of which has it hitherto been observed: it has been sometimes described as a winter migrant, but MUDIE and MACGILLIVRAY agree in making it a permanent resident with us, the eggs and young having been found, they say, repeatedly in the vicinity of Epping Forest. Mr. H. DOUBLEDAY, who appears to have paid great attention to the habits of these birds, writes thus, in the *Magazine of Zoology and Botany*, vol. i.:—“Their extreme shyness has, no doubt, contributed to keep us in ignorance of their habits and economy; in this trait they exceed any land bird with which I am acquainted, and in open places it is almost impossible to approach them within gun-shot.” Their principal food here appears to be the seed of the hornbeam (*carpinus betulus*), which is the prevailing species of tree in Epping Forest; they also feed on the kernels of the haws, plum stones, laurel berries, &c.; and in summer make great havoc amongst green peas in gardens in the vicinity of the forest.

“About the middle of April they pair, and in a week or two commence nidification. The situation of the nest is various; but is most commonly placed in an old scrubby whitethorn bush, often in a very exposed situation; they also frequently build in the horizontal arms of large oaks, the heads of pollard hornbeams, in hollies, and occasionally in fir trees in plantations; the elevation at which the nest is placed, varying from five to twenty-five or thirty feet. The most correct description of the nest which I have seen, is in LATHAM’s *Synopsis*.

“I believe the male has no song worth notice; in warm days in March, I have heard them, when a number have been sitting to-

gether on a tree, uttering a few notes in a soft tone, bearing some resemblance to those of the Bullfinch."

"A female in the possession of Mr. Bartlett," says YARRELL, "sung the notes of the Linnet; but being afterwards hung out of doors, it learned to imitate the song of a Blackbird, though but indifferently; on the occurrence of the autumn moult this season she discontinued her imitations of the Blackbird's song, and seemed afterwards to have forgotten it."

JESSE states that the bird not only stays with us all the year, but breeds in this country, and cites an instance of a nest with four young ones, which was taken in the summer of 1842, in the grounds of Lord Clifford, at Roehampton. It was built at the extremity of a horse-chestnut, near the lodge, and composed chiefly of twigs of the privet and birch, and lined with hair and fine grass. LATHAM also describes the nest of this bird, which he says is composed of the dead twigs of oak and honeysuckle, intermixed with pieces of grey lichen, which material, he says, is never absent, although the quantity used varies greatly.

"The Latin ornithologists," says WHITE, "call this bird *cocco-thraustes*, i.e. berry-breaker, because with its horny beak it cracks and breaks the shells of stone fruit, for the sake of the seed or kernel. Mr. B. shot a cock Grosbeak, which he had observed to haunt his garden for more than a fortnight. I began to accuse this bird of making sad havoc among the buds of the cherries, gooseberries, and wall fruit of all the neighbouring orchards. Upon opening the crop, or craw, no buds were to be seen, but a mass of the kernels of the stones of fruit."

70. THE SERIN FINCH.

Loxia Serinus, or Fringilla Serinus, LIN. *Le Serin*, BUF. *Der Girlitz*, BECK.

Description.—The Serin Finch seems to occupy an intermediate position between the Grosbeaks and the Finches; as its beak appears too thick to qualify it for a place in the latter, and too thin for one in the former genus.

It is somewhat larger than a Siskin, being four inches and three quarters in length, of which the tail measures one inch and three quarters. The beak is very short and thick, brown on the upper, white on the under side; the iris is dark chestnut brown; the shanks six lines in height, and, as well as the claws, flesh-colour. The plumage of the male bears a close resemblance to that of the Grey or Green Canary. The top of the head, the circle of the eyes, a stripe which passes above the eye to the nape of the neck, the breast, and the rump, are

all greenish yellow. The back of the head, cheeks, and lesser wing coverts are Siskin green and reddish grey, mixed with blackish spots. The two larger rows of coverts are blackish, the upper having a margin of bright yellow, the lower of reddish yellow, which produce the appearance of a double yellow stripe across the wings. The pen feathers are blackish, edged with Siskin green; the tail is somewhat forked, and of similar hue. The spots with which the plumage is covered are not distinct one from the other, but unite in a sort of longitudinal stripe. On the head they are very small, but on the sides and rump their shape and colour are more visibly marked.

The female can with difficulty be distinguished from the female Siskin. The colour of the plumage is the same, except that it has a tinge of reddish grey, but the beak is shorter, the tail longer, and the body more slender. The principal difference between the female and male is, that in the former the yellowish green breast is striped with black.

Observations.—The Serin Finch, which some are disposed to consider identical with the Citron Finch, may in spring or autumn be lured either to the barn-floor or decoy trap. In Thuringia this is the usual mode of taking them.

For the remaining part of this article I am indebted to my friend Dr. MEYER, of Offenbach :

“ Of all Cage-birds with which I am acquainted, the Serin Finch is one of the liveliest and most indefatigable in singing. Its voice, though not strong, is sweet; and, except a few passages in which it resembles the song of the Lark, is remarkably like that of the Canary bird. In a wild state it sings incessantly, either perched on the topmost branches of some tree, or rising and falling in the air like a Lark, or flying from one tree to another. Its call, too, is like that of the Canary, to which bird, indeed, it bears, in habits and peculiarities, a strong general resemblance.

“ *Habitat.*—It is now thirty years since the Serins were first observed in the district between Offenbach and Frankfort. They arrive every year in March, in large flocks, and depart about the end of October, although there are always some which remain throughout the winter. In January, 1800, when the thermometer was at 21° Réaumur, several were taken here, and I have seen them in the neighbourhood of Offenbach as late as the end of February. They may most frequently be

observed on or near fruit trees, or in woods, near oaks and beeches, and I have never yet met with them on the banks of streams which are shaded by willows.

“Food.—They feed on such seeds as are usually to be found in the fields, and are especially fond of those of the plantain, groundsel, and garden pimpernel. The best diet for them, when in confinement, consists of rape, mixed with a little poppy seed, and occasionally hemp-seed and shelled oats.

“Breeding.—The Serin generally builds its nest on the lower branches of apple and pear trees, sometimes on oaks and beeches; but never, so far as I know, on willows. It is formed, not artificially, of an external layer of fine root fibres, moss, and lichens (especially *Lobaria farinacea*), and thickly lined with feathers, cow hair, horse hair, and swine’s bristles. The female rarely lays more than four white eggs, shaped like those of the Canary, but a little smaller, and encircled at the thick end with a row of reddish brown spots. The period of incubation is thirteen or fourteen days, during which the male feeds his mate upon the nest, and afterwards assists her in bringing food to the young birds. Before the first moulting, the young birds bear a strong resemblance to the Grey Linnet, and do not acquire the plumage of their parents till after that period. They may easily be reared on soaked rape seed, but it is better to take old and young together, and put the whole brood into a cage, when they will persevere in the natural process of instruction. If brought up in confinement, their colours are never so bright as in a wild state; and after a few years, even birds that were taken when old, become almost white. They breed with Canaries, Siskins, Redpoles, and Goldfinches.

“Diseases.—With the exception of consumption, of which a bird in my possession died, I know of none to which they are liable.”

FOREIGN GROSBEAKS.

71. THE CARDINAL GROSBEAK.

Loxia Cardinalis, LIN. *Grosbec de Virginie*, BUF. *Der Cardinal Kernbeisser*, BECH.

Description.—This bird is eight inches in length, of which the tail measures two inches. It is a native of various parts

of North America. According to recent accounts, it has been met with in Courland; though it is more likely that the bird seen was either one that had escaped from captivity, or a specimen of the Pine Grosbeak. Its beak is strong, and, like its feet, light red; the iris very dark brown. The head is adorned with a crest, the feathers of which, when erect, meet in a point. The part round the beak, and the throat, are black; the rest of the bird a beautiful light red. The quill feathers and tail are paler in colour, and towards the front, almost brown.

The female is generally of a reddish brown.

Observations.—The very pleasant song of this bird, which bears a strong resemblance to that of the Nightingale, is the reason why the name “Virginia Nightingale” has been given to it. It sings all the year round, except while moulting, and so loud as to make the ears tingle. In its wild state it feeds on maize and buck wheat—of which it often collects heaps, covering them carefully with leaves and branches, and leaving open only a single hole as an entrance to its magazine. In captivity it will live many years, if fed with millet, canary, rape, and hemp-seed. The attempt has been made, I know not with what success, to breed these birds, in detached aviaries placed in gardens.

ADDITIONAL.—With us this species is known only as a Cage-bird. We commonly call it the Virginia Nightingale, a name to which, as Dr. LATHAM observes, it is fully entitled, for its notes are almost equal to those of the Nightingale. These notes, WILSON tells us, both in a wild and domestic state, are very various and musical, some of them resembling the shrill notes of a fife. “The birds are in song from March to September, beginning at the first appearance of dawn, and repeating a favourite stanza or passage twenty or thirty times successively; sometimes with little intermission for a whole morning together, which, like a good story too often repeated, becomes at length tiresome and insipid. But the sprightly figure and gaudy plumage of the Red Bird, his vivacity, strength of voice, and actual variety of note, and the little expense with which he is kept, will always make him a favourite.”

This author asserts that the story of the birds collecting great hoards of maize and buckwheat, &c., and concealing them in the artful way above described, is altogether fabulous. He also describes the cock birds as extremely pugnacious, and says of the female that she often sings nearly as well as the male, by which, when both occupy the same cage, she is often destroyed, owing, it may be, to some little jealousy on this score.

72. THE JAVA SPARROW, OR RICE BIRD.

Loxia Orycivora, LIN. *Padda ou Oiseau des Riz*, BUF. *Der Reis-Kernbeisser*, BECH.

Description.—This bird, which is about the size of a Bullfinch, is five inches long, of which the tail measures two. The beak is thick, of a beautiful rose colour, which is lighter towards the point; the feet are the same, though of a paler hue. The eyelids are naked, and edged with rose colour; the head, throat, and a stripe surrounding the white cheeks, are black. The rump, the greater pen feathers, and the tail, are also black; the rest of the back, the breast, the wing coverts, and the hinder pen feathers, dark ashen grey. The belly is purple grey, and the vent white.

The only distinction between males and females is, that the latter are lighter on the back and belly. The young birds are not only lighter, but irregularly spotted with dark brown on the cheeks and the lower part of the belly.

Observations.—These birds are brought in great numbers by ships from Java, and the Cape of Good Hope; where, on account of the ravages they commit in the rice fields, they have as bad a reputation as the Sparrows among ourselves. They are prized only for their beauty. Their cry is “*Tak! Tak!*” Their song is very monotonous, and consists of two notes, “*Dirr! Dirr! Déhi!*” The first note is given with a humming sound; the second is higher in the scale, and much more clearly uttered.

73. THE WAXBILL.

Loxia Astrid, LIN. *Le Senigalirayé*, BUF. *Der Gemeine Senegalist*, BECH.

Description.—This bird, which is four inches and three quarters in length, is hardly so large as a Redbreast. The beak is bright red, and somewhat raised at the root. A bright red stripe passes between the eyes; and the middle of the breast and belly is a beautiful reddish brown. The upper parts of the body are brownish grey; the lower parts light ashen grey; everywhere traversed by very fine blackish wavy lines, which give the plumage a peculiarly silky appearance. The pen feathers and tail are brown; the latter being wedge-shaped, and covered with transverse dark brown stripes: the feet are also brown.

These birds, like the Amandava, vary in colour. In some, the tail is entirely brown; in others, the upper part of the body is brown, the lower white, and the rump crimson. Others, again, are yellow on the lower part of the body, and on the upper spotted with white; and some have even been noticed with blueish neck and throat; the upper part of the body blue, and the lower part white, mixed with rust colour.

Observations.—These birds, which are frequently brought to Europe, are natives of the Canary Islands, Madeira, Senegal, the Cape of Good Hope, and India. Their beauty and affectionate disposition, which is manifested not only between the sexes, but even when several pairs are kept in one cage, are their chief recommendation. Their song presents nothing remarkable. They are to be fed with millet, which is their natural food, and to fields of which grain they are said to do great damage.

74. THE AMANDAVA.

Loxia, or Fringilla Amandava, LIN. Bengali Pigneté, BUF. Der Getiegerte Bengalist, BECH.

Description.—This beautiful bird, which is now frequently imported from Bengal, Java, Malacea, and other parts of Asia, is not more than four inches in length. I am induced, by its shape, to place it among the Grosbeaks, though I am aware many class it with the Finches. The beak is four lines in length, thick, and bright blood red. The iris is light red; the feet pale flesh colour, and the shanks half an inch in height. In the male, the head and under part of the body are of a fiery red; the upper part is dark grey; but all the feathers have so wide a margin of red, that here also the latter seems to be the prevailing colour. The rump appears of a bright yellowish red; though the feathers are really blackish, and are only edged with yellow; the belly and vent are black. All the feathers of the back, the wing coverts, the hinder pen feathers, tail feathers, side feathers of breast and belly, and the feathers of the vent and rump, are tipped with white. These spots are most distinctly marked on the hinder pen feathers, and the large wing coverts. The wing coverts and pen feathers themselves are blackish.

In the female, which is only about two thirds the size of the male, part of the upper mandible is black; the head, and upper part of the body, together with the wing coverts, are

very dark grey; and only the rump feathers have broad yellow margins, and light coloured tips. The cheeks are light grey; the under part of the body is pale sulphur colour; the pen feathers blackish. The hinder and larger wing coverts are covered with very small white spots, and the tail feathers are tipped with greyish white.

The male varies in colour for many years before permanently attaining the colours above described. In some individuals the back is a reddish grey, and the lower part of the body marked with black and yellow; in others, the upper part of the body is reddish grey, spotted with fiery red; the belly sulphur-coloured, with black bands, and more or less spotted.

Observations.—These birds are as social as the preceding; and when twenty or thirty are kept in a large cage, they will all sit on the same perch, and, what is singular enough, will sing in regular succession. Their song, which lasts throughout the year, very much resembles that of the Yellow Wren. The female is mute. They are exceedingly active, and often bow their bodies up and down, and spread out their tails like a fan. Their natural food is millet and other grain; in confinement they may be fed on millet and canary seed. They are to be kept in a small wire cage; eat a great deal, and drink still more. They live from six to ten years. If paired with the Canary bird, the hybra produced would probably be of great beauty and value.

75. THE PARADISE GROSBEAK.

Loxia Erythrocephala, LIN. *Cardinal d'Angola*, BUF. *Der Paradies Kernbeisser*, BECH.

Description.—This bird is almost six inches in length. The beak and feet are flesh coloured: the head and chin red: the back of the neck, back, rump, and wing coverts blueish ash colour; the upper tail coverts edged with grey. The lower parts of the body are white, with brown and black spots on the sides. The wing coverts are tipped with white, which forms a double white stripe on the wings; the pen feathers and tail are dark ashen blue, tipped with grey. The male and female are alike.

Observations.—The male sings throughout the year, but in so weak a voice, as to be hardly audible above the slightest noise. In England, the experiment of inducing them to breed

in the aviary has been successfully tried. They are to be fed on millet and rape seed, with which a little hemp seed may be occasionally mixed.

76. THE DOMINICAN GROSBEAK.

Loxia Dominicana, LIN. *Cardinal Dominicain*, BUF. *Der Dominicaner Kernbeisser*, BECH.

Description.—This bird, which is about the size of a Lark, is a native of Brazil. The upper mandible is brown, the lower light flesh coloured; the feet ashen grey. The head, throat, and upper part of the neck, are blueish, with a small admixture of white; the tail coverts and scapulars grey, sparingly spotted with black. The sides of the neck, the breast, belly, beak, and vent, are whitish; the pen feathers black, edged with white; the tail black.

Observations.—This bird is noticeable only for its beauty, as it has no song, but occasionally utters a harsh cry.

77. THE GRENADEER GROSBEAK.

Loxia Orix, LIN. *Le Cardinal du Cap de bonne Esperance*, BUF. *Der Grenadier Kernbeisser*, BECH.

Description.—This bird is about the size of a Sparrow. The beak is black; the iris chestnut brown; the feet dark flesh colour. The forehead, sides of the head, the chin, the lower extremity of the breast, and the belly, are a velvety black; the rump, vent, tail, throat, neck, and upper part of the breast, a bright carmine. The back and shoulders are somewhat darker than the neck; and the feathers on the top of the neck are rather larger than elsewhere, which gives this part a puffy appearance. The shanks are reddish grey; the wings dark brown, or blackish grey, edged with reddish white.

There are varieties of this species; one of which wants the black chin, and has the shanks red. Another has a dark brown tail, edged with greyish white.

In the female the beak is horn colour; the feathers of the upper part of the body dark brown, edged with light grey. The head is dark grey; a whitish grey stripe passes over the eyes; and the lower part of the body is light grey. It is therefore not unlike the female Sparrow; the general colour of its plumage is not so dark.

After the second moulting in the aviary, the males present

much the same appearance, except that the marking is darker. The feathers on the upper part of the body are blackish, with a broad margin of reddish grey; and the stripe over the eyes is a pale sulphur colour. In a wild state the males lose the red colour, and become like the females, after the pairing time, which is in January. They resume their own garb in July. Their appearance is very handsome when the moulting is not quite over,—as they then have, in addition to the variegated head and body, a red neck and tail.

Observations.—These birds are so common at the Cape of Good Hope, as to do as much damage to the wheat blossom and young grain, as the Sparrows with us; and when in the evening they return from the corn fields to their nests, among the reeds, their twittering may be heard at a great distance. Their cry, “*Deeb!*” is like that of the Sparrow; and in their weak song, they resemble the Siskin. Their nest is cleverly constructed of small twigs and cotton, and though with only one entrance, has two distinct chambers, one for the male, and the other for the female. The eggs are green.

The Grenadier Grosbeak should be kept in a small cage, and fed on canary seed. The male and female seem to enjoy each others' society, but there is no instance known of their having paired.

78. THE CAPE GROSBEAK.

Loxia Capensis, LIN. *Le Pinçon noir et jaune*, BUF. *Der Kapsche Kernbeisser*, BECH.

Description.—One of these handsome birds, which I myself possess, is about the size of a Bullfinch, being six inches and a quarter in length. Of this, the tail, which is somewhat wedge-shaped, measures two inches and a half. The beak is whitish on the upper mandible, very much compressed at the sides, and pointed; the iris is dark brown; the feet dark flesh colour. The head, the neck, the top of the back, the under part of the body, and the tail, are a velvety black; the rest of the back, the rump, and the smaller wing coverts, a beautiful golden yellow. The larger wing coverts, as well as the pen feathers, are blackish, or very dark brown, edged with greenish yellow. The scapulars are light brown, with broad margins of greyish red.

The female is light brown, though all the feathers are spotted

in the middle with black ; the sides of the head and wing coverts are greyish white, striped with black ; the smaller wing coverts and the rump are light yellow ; the tail is edged with grey ; the beak light or horn grey.

At pairing time, or the period of the second moulting, the male resembles the female.

Observations.—Like the last mentioned, this bird is a native of the Cape of Good Hope. It may be kept in a cage by itself, or with a female, and fed upon hemp and canary seed. Its song is not remarkable.

In a wild state, it frequents rivers and brooks, and though living on grain and seeds, is not so destructive a bird as the foregoing. Its eggs are grey, spotted with black.

79. THE CAFFRARIAN GROSBEAK.

Loxia Caffra, LIN. *Le Caffre*, BUF. *Der Mohren Kernbeisser*, BECH.

Description.—This bird is about the size of a Bullfinch ; but its slightly erected tail, with which, however, it is adorned only in the pairing season, is twice as long as the bird itself. The beak is greyish brown ; the feet grey. The prevailing colour of the plumage is a velvety black ; the shoulders are blood red ; the wing coverts white ; the pen feathers brownish grey, edged with white.

The female is entirely grey, with the exception of a slight tinge on the shoulders. The male assumes his beautiful garb in November, and after pairing time, which is in January, becomes like the female.

Observations.—The Caffrarian Finch is a native of the inland country, north-west of the Cape of Good Hope, where it makes its nest in the marshes. It is but seldom brought to Europe ; and on account of its long tail, needs a very large cage. It is said that in high winds this tail is very inconvenient ; and in rainy weather, is so cumbrous, that the bird may even be caught by hand. It may be fed on canary seed.

80. THE BLUE GROSBEAK.

Loxia Cærulea, LIN. *Le Bouvreuil bleu d'Amérique*, BUF. *Der dunkelblaue Kernbeisser*, BECH.

Description.—The Blue Grosbeak is about the size of the Common Crossbill, but somewhat longer, being six inches and a half in length, of which the beak measures half an inch,

and the tail two inches. The beak is strong and dark brown; the feet black. A black stripe surrounds the chin, and extends as far as the eyes. The whole of the plumage is dark blue, except the larger wing coverts, the pen feathers, and middle tail feathers, which are dark brown. A few red spots are visible on the shoulders; and the under sides of the wings and tail incline to green.

The female is brown, with a very slight tinge of blue.

Observations.—I have seen this bird, which is a native of Carolina, Brazil, and Cayenne, in the possession of the Duke of Saxe Meiningen. It is fed with canary seed. Its song is weak, and its cry but rarely heard.

81. THE AZURE-BLUE GROSBEAK.

Loxia Cyanea, LIN. *Der Lazurblauer Kernbeisser*, BECH.

Description.—This bird is generally regarded as only a variety of the last mentioned, but I have seen the two together, and have a strong opinion that they are different. The Azure-blue Grosbeak is rather the smaller. The beak is lead colour; the iris nut brown; the feet blackish. The plumage is dark azure-blue; the pen and tail feathers blackish, edged with blue. The wing coverts, as well as several feathers upon the breast, have a border of golden yellow; the shank and vent feathers are edged with white.

Observations.—This very handsome bird is a native of Angola, and may long be preserved in health on hemp and canary seed, and crushed oats. Its song is weak but pleasant, and resembles that of the Siskin. It is always lively, and becomes so tame as to eat out of the hand.

82. THE YELLOW-BELLIED GROSBEAK.

Loxia Flaviventris, LIN. *Grosbec Jaune du Cap de bonne Esperance*, BUF.
Der Gelbafterige Kernbeisser, BECH.

Description.—I have seen this bird in the collection of the Duke of Saxe Meiningen, but cannot certainly identify it with the *Loxia Flaviventris* of LINNÆUS. It is about the size of a common Chaffinch, and five inches in length. The beak is horn brown, moderately thick, and resembling in shape that of the Finch tribe. The feet are dark brown. The head and neck are a dull light blue; the whole upper part of the body olive green; the breast, as far as the vent, orange.

Observations.—This bird, which is a native of the Cape of Good Hope, is said by birdsellers to be the female of the Blue Grosbeak, and certainly agrees very well with it, when kept in the same cage. It may possibly, also, be the female of the bird described in the note.*

83. THE GOWRY GROSBEAK.

Loxia Punctularia, LIN. *Grosbec tacheté de Java*, BUF. *Der Getüpfelte Kernbeisser*, BECH.

Description.—The Gowry Grosbeak is four inches and a quarter in length, and about the size of a Linnet. The beak and feet are black; the whole upper part of the body, and the lower part as far as the breast, are light chestnut brown. On the cheek is a purple spot, which, however, is not visible in young birds, or such as have just moulted. The belly and sides are white, but all the feathers are bordered with black, in the form of a heart. The lower part of the belly and vent are reddish white; the rump feathers edged with grey. The tail is short and wedge-shaped, and is dark brown like the wings, but mottled and edged with the same colour on the upper part of the body.

In the female the red spot upon the cheek is wanting; the beak and feet are dark brown; the back reddish brown; the sides white, spotted with dark brown; the vent whitish.

Observations.—These birds are natives of the Island of Java. They may be kept in a cage, and fed on canary seed. Their weak and twittering song resembles that of the Siskin.

84. THE BANDED GROSBEAK.

Loxia Fasciata, LIN. *Collerette*, BUF. *Der gebänderte Kernbeisser*, BECH.

Description.—This bird, which is about the size of the pre-

* *Le Grosbec Jaune du Cap de bonne Esperance* is thus described:—The head, back of the neck, and back, are olive green, striped with brown; the rump olive green; the lower part of the body dark yellow. From each side of the head a yellow stripe passes over the eyes; and the pen feathers and tail are brown, edged with olive green. The female is only distinguished by the comparative dullness of the colours. A variety has the top of the head, breast, and upper part of the body olive green; the back of the neck to the throat, ash colour; the belly and vent yellow; the part between the legs white; the tail feathers black, edged with yellow; the tail dark green, having the shafts of the feathers black, and their external plume yellow.

ceeding, is four inches and a half in length. The beak is blueish grey, thick at the root, compressed in the middle, and running rapidly to a point. The feet are short, and flesh-coloured. The upper part of the body is a dark reddish grey, each feather having two black stripes, of which, however, only one is visible. The wings and tail are blackish, the former being lighter on the edge, the latter tipped with white. The belly is black, covered with reddish white, egg-shaped spots. The rest of the lower part of the body is reddish brown grey, the feathers being edged with black. A dark purple collar surrounds the cheeks and chin.

The female is generally lighter; the collar is wanting, and the under part of the body is reddish brown, with a darker shade on the edge of the feathers.

Varieties.—A male, which I have now before me, may be described as follows:—The head is reddish grey, with frequent black stripes; the upper part of the neck, the back, and rump, are reddish grey, but each feather is intersected by a semi-circular black line, and tipped with reddish brown; the scapulars, wing coverts, and hindmost pen feathers, are dark ashen grey, with a transverse angular black stripe, and reddish brown tips. A narrow stripe encircles the lower mandible, beneath which is a purple streak, which passes to the cheeks. The lower part of the neck, the sides, and shanks, are pale reddish brown, with an angular black stripe on each feather. The breast is white, tinged with red at the sides. The belly is a fine chestnut brown, covered with oval white spots, and striped with black only at the sides. The vent is white; the wings and tail are dark brown, edged with reddish brown; the latter being also tipped with white.

In LATHAM's *Synopsis* this variety is thus described:—The top of the head, back of the neck, back, and small wing coverts, are light brown, covered with semicircular black lines; the cheeks are brown, but bordered below with a bright crimson line, beneath which runs a black one. The breast and belly are light brown, and sparingly marked with the semicircular lines; the pen feathers and tail brown.

Observations.—This bird although a native of Africa, has received from the bird sellers the name of the Indian Sparrow. It utters the same cry as the Common Sparrow, and its song is as worthless. It may be fed on canary seed.

85. THE BROWN-CHEEKED GROSBEAK.

Loxia Canora, LIN. *Der braunwangige Kernbeisser*, BECH.

Description.—The Brown-cheeked Grosbeak, which is about the size of a Siskin, is four inches in length. The beak is thick, strong, and brown; the feet flesh-colour. The brown cheeks are adorned with a yellow border, which extends from the throat to the ears. The head, back, wings, and tail, which is somewhat wedge-shaped, are dirty light green; the breast and belly are ashen grey.

In the female the yellow stripe on the cheeks is wanting.

Observations.—This pretty bird, which is a native of Mexico, has a soft flute-like song, and is lively and engaging in its movements. It may be kept in a cage, and fed on millet and canary seed.

86. THE MALACCA GROSBEAK.

Loxia Malacca, LIN. *Jacobin*, BUF. *Der Malackische Kernbeisser*, BECH.

Description.—This bird, which is about the size of a Greenfinch, is four inches and a half in length, of which the beak, which is thick and ashen blue, measures five lines, and the tail one inch and a half. The feet are ashen blue; the head, neck, a stripe which passes from the centre of the belly to the vent, and the thighs, are black; the breast and the sides of the belly white; the back, wings, and tail, chestnut brown—both the latter being darker on the under side. The head and body are each somewhat clumsy in shape.

BRISSON'S "Grosbec de la China" (*Ornithology*, iii. p. 235, note 7) is sometimes considered as a variety of the Malacca Grosbeak. Its head, throat, and neck, are black; the plumage on the upper part of the body, red, or chestnut brown; wings and tail as in the preceding. I have often seen this bird in the aviary, and always regarded it as a male, both on account of its song, and because after moulting it resumed the same colours, without white on the breast or black on the belly.

EDWARDS, who has figured this bird (plate 355), adds also a female, which was kept in the same cage, and seemed to enjoy the society of the male. She was greyish brown on the upper part of the body; the sides of the head, and lower part of the body, were reddish white; the pen feathers and tail blackish;

the feet flesh-colour. The blackness of the tail and pen feathers seem to shew that this bird does not really occupy the place assigned to it by EDWARDS, nor does the familiarity with the male prove anything, as almost all seed-eating birds agree well together, and even caress one another with their bills.

Observations.—This bird is a native of the East Indies. It is gentle, lively, and affectionate; its voice is strong, and its song, though having a somewhat nasal ring, is not unpleasant. Its cry is “*Tziapp!*” It will live for a long time, if fed on hemp and canary seed.

87. THE BLACK-CLOUDED GROSBEAK.

Loxia Nubilosa, BECH. *Der Schwarzwölkige Kernbeisser*, BECH.

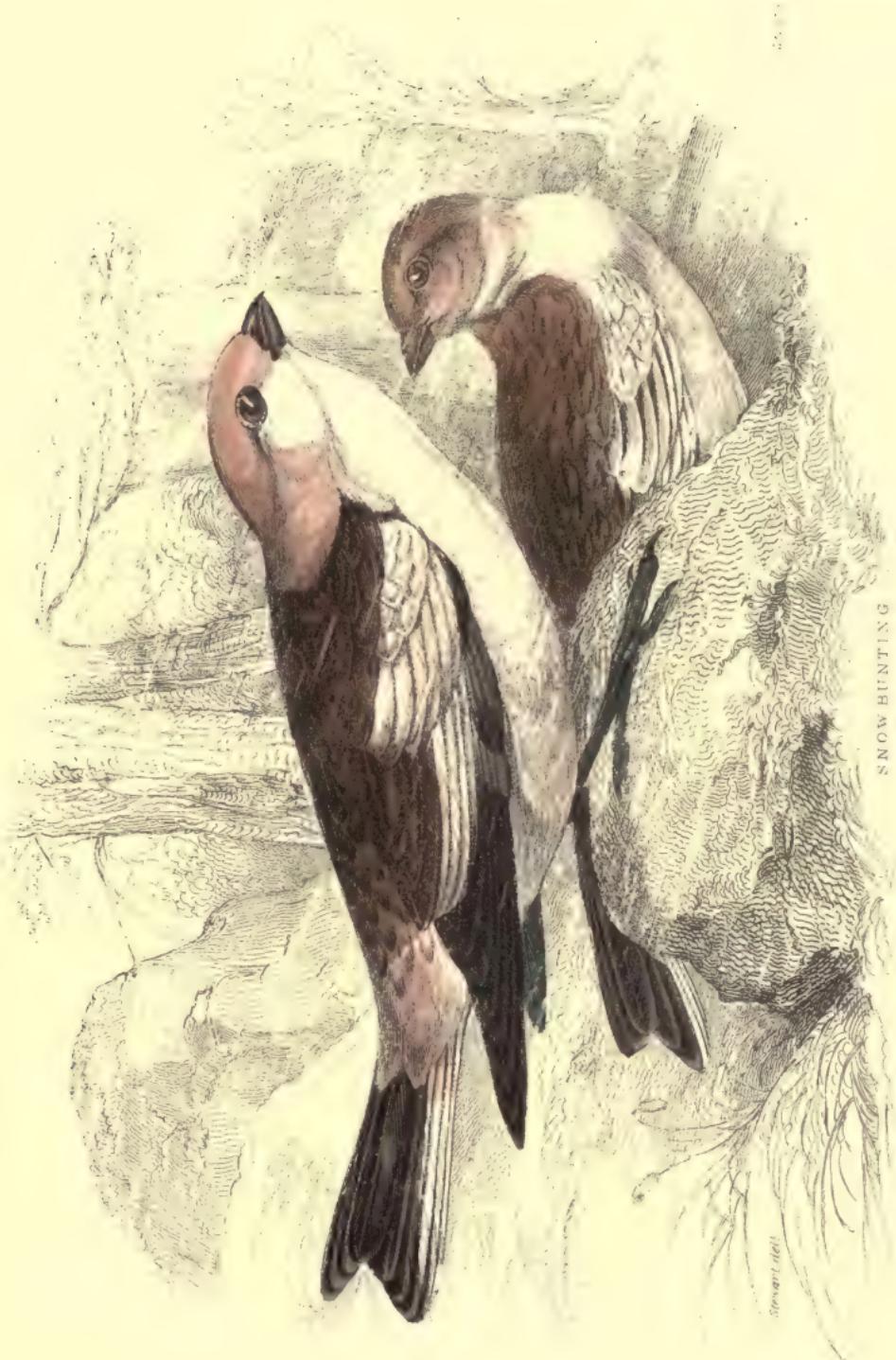
Description.—I have seen two of these birds, which seemed to me to bear a strong resemblance to the Molucca and Black Grosbeaks, though not absolutely identical with them. The Black-clouded Grosbeak is about the size of a House Sparrow. The beak is strong, and whitish grey; the feet are large, and lead-coloured. The prevailing colour of the plumage is black, though the rump and vent are white; the lower part of the body is whitish grey, and the wing coverts are clouded with reddish grey. After every moulting, the under part of the body and wings becomes lighter.

Observations.—This bird is a native of Africa, and especially of the Cape of Good Hope. It is very tame; its cry is “*Tzeeb!*” and its song, which is not very melodious, consists merely of a continuous twittering. If fed on millet, hemp, canary, and rape seed, it will live for many years.

1. The Molucca Grosbeak (*Loxia Molucca*, LIN.) may be thus described. It is four inches in length; the beak is dark brown; the top of the head and neck, black; the back of the head and upper part of the body, brown; the breast and belly covered with transverse stripes of black and white; the tail black; the pen feathers dark brown; the feet brown.

2. The Black Grosbeak (*Loxia Nigra*, LIN.) is five inches and a quarter in length. The beak is black, strong, and much compressed about the centre of the upper mandible; the plumage generally black, with the exception of a white spot in front of the wings, and the roots of the two first pen feathers, which are also white; the feet are black. This bird is a native of Mexico.

SNOW BUNTING



88. THE RED-BILLED GROSBEAK.

Loxia Sanguinirostris, LIN. *Der Rothschnäbliche Kernbeisser*, BECH.

Description.—This bird, which is about the size of a House Sparrow, is often brought by bird-dealers from England for sale in Germany. It originally comes from Africa. Its beak is thick, wide at the base, bare at the forehead, and of a dark blood-red colour; the forehead, the region round the eyes, and the chin, black. The upper part of the body is of a greyish brown, with black longitudinal stripes, almost like the Sparrow; the under part is of a clear brownish red. The quill and tail feathers are dark brown, spotted with reddish grey; the feet and the irides are orange; the eye-lids a yellowish red.

The female is much lighter; the black mark on the head is altogether wanting, and the under part of the body is a yellowish white.

Observations.—As before remarked, this is a Cage-bird of common occurrence. It is fed with millet and canary seed; and is a favourite, not only on account of its beauty, but also of its delicate song, which resembles that of the Yellow Wren. The male and female caress each other incessantly, but never pair, or build in the cage. They attain a considerable age.

89. THE SNOW BUNTING.

Emberiza Nivalis, LIN. *Ortolan de Neige*, BUF. *Der Schnammer*, BECH.

Description.—Naturalists assert that the plumage of this bird differs considerably, according to the season of the year. The truth of this assertion I do not pretend to decide, though, from analogy, I am warranted in conjecturing that the difference arises rather from the age of the birds. And as in summer this bird inhabits regions within the arctic circle, I shall content myself with describing its winter plumage, as it may be seen in confinement.

It is about the size of a Lark, and six inches and a half in length. The beak, as in all Buntings, is conical in shape, six lines long, bent inwards at the sides, and having a hard protuberance at the palate. Its colour is yellow, tipped with black, except in the singing season, when it is entirely black. The legs are one inch high, and, as well as the claws, coal

black. The head, neck, and under part of the body, are white, the head being sometimes spotted with yellowish brown. The back and rump are black; the feathers of the back are edged with white, and those of the shoulder and rump with brownish yellow, darker in spring than in summer. The first row of pen feathers are half white, and black towards the point; the others are white, except those which lie upon the last three pen feathers, which are black, with a border of yellowish brown. The tail is forked; the three first feathers being white, with a black stripe at the point; the following four black, edged with yellow.

The female is somewhat smaller: the head and upper part of the neck are white, with a mixture of yellow or cinnamon brown; and spots of similar colour form a kind of broken band across the white breast. The young, which may be caught in winter, are known by the dark brown beak, and the back of the same colour, bordered with greyish white. The young male is always speckled with yellowish brown at the back of the head; the young female has yellow cheeks, and spots of the same colour on the breast.

Observations.—In severe winters, these birds may be met with in Germany, from December till May, especially in the north, where they even approach the villages. If attention were paid to their movements, they might be observed everywhere in March on their road home; and when snow falls, might be seen on the highways, and in the fields, in company with Larks. They may be caught with horse-dung, covered with limed twigs; or on a spot which has been cleared from snow, and strewed with oats. I kept a pair, which were allowed to range the room, for six years, on the ordinary paste; if confined in a cage, they must be fed on oats, millet, poppy, hemp, or linseed. They are fond of bathing; and are very restless birds, especially during the night. Their cry is clear and loud, resembling a whistle; their song is interrupted, consisting of twittering notes, mixed with high noisy ones, gradually descending in the scale, and others, more like a loud broken whistle. It is, however, not disagreeable. They must be kept cool, as they are unable to bear even a moderate degree of heat.

ADDITIONAL.—This bird has been variously called the Tawny, Mountain, and Snow Bunting; also the Snowflake, Snow-fowl,

Oat-fowl: MACGILLIVRAY terms it the Snow Lark Bunting, and describes it as "a neat and lively little bird, about the size of the Yellow Bunting, and nearly of the same form, the body compact, the head of ordinary size, the wings rather long." The 28th of September is the earliest period at which this naturalist has observed these birds in Scotland, and that was in the Outer Hebrides; he supposes that they may occasionally breed on the higher Grampians, although he does not think it likely that the vast flocks seen in the lower grounds in winter are exclusively of Scottish origin.

"Towards the end of October, these birds make their appearance along the coasts, or on the higher grounds, of the south of Scotland; and about the same period in the south of England, although there they are of much less frequent occurrence.

"Assembled in large straggling flocks, or scattered in small detachments, they may be seen flying rather low along the shore, somewhat in the manner of Larks, moving in an undulating line by means of repeated flappings and short intervals of cessation, and uttering a soft and rather low cry, consisting of a few mellow notes, not unlike those of the Brown Linnet, but intermixed at times with a sort of stifled scream, or chirr. When they have found a fitting place they wheel suddenly round, and alight rather abruptly, on which occasion the white of the wings and tail becomes very conspicuous. They run with great celerity along the sand, not by hops, like the Sparrows and Finches, but in a manner resembling that of the Larks and Pepits; and when thus occupied, it is not in general difficult to approach them, so that specimens are easily procured. Indeed, it frequently happens that they allow a person to walk up within five yards, or even less.

* * * * *

"Although the American ornithologists speak of their alighting on trees, I have never seen them perch on even a bush, or on any other high place than a crag, the top of a wall, or a corn stack, in which respect they resemble our Field Lark. It is not often, however, that they alight on the stacks, for they prefer searching the ground around them. In the villages along the coast of East Lothian, they are sometimes, in spring, nearly as common as Sparrows, and almost as familiar. About Leith, where they are generally found in winter on the beach, even close to the pier, they have a very different appearance from that which they present in parts of the country remote from towns, for their plumage is as much soiled as that of the London Sparrows.

"About the middle of April, or sometimes a week later, these birds disappear, and betake themselves to their summer residence. The nest and eggs of this species are unknown to me, and, indeed, have not hitherto been detected in Britain."

90. THE MOUNTAIN BUNTING.

Emberiza Montana, LIN. *Ortolan de Montagne*, BUF. *Der Bergammer*, BECH.

Description.—This bird is somewhat smaller than the preceding. The beak is short, strong, and yellow, with a black tip. The head is almost four-cornered; the frontal band is light chestnut; the back of the head and the cheeks still lighter. The nape of the neck and the back are ash-coloured, the latter being spotted with black, in which respect it resembles the female Yellowhammer. The throat is white; the breast and the region of the eyes a rusty red. Over the first is a brownish red stripe, which shows itself in young birds only, as an indistinct mark. The wing coverts are blackish grey, the larger ones being edged with white. The five first pen feathers are blackish brown; the rest white, and the points of all striped with brown. The three exterior pen feathers are white, the rest dark brown; the feet are black.

In the female, the head is mottled with black, reddish yellow, and white; the back of the neck is reddish yellow, tinged with grey; the belly the same colour, inclining to white.

Observations.—This handsome bird inhabits Northern Europe, but is by no means common. In Thuringia, as well as in other parts of Germany, especially after stormy weather and deep snow, it may often be met on its return northwards, in March. A pair are generally seen together, on the highways and paths, seeking plantain seed and grains of corn in the horsedung. It has a clear voice, and its song, though interrupted, like the Yellowhammer, is not disagreeable. Its call is “*Tzoerr! Tzoerr!*” When confined either in an aviary or a cage, it thrives on bread, oats, poppy and hemp seed. At night, especially in pairing time, it is, like the Snow Bunting, very uneasy, and utters its call, however dark it may be.

Some individuals of this species are occasionally met with, which are reddish grey on the upper part of the body, yellowish on the head, and spotted with dark brown on the back. These are young birds.

The Mountain Bunting may be caught in the same manner as the preceding species.

91. THE YELLOWHAMMER.

Emberiza Citrinella, LIN. *Le Bruant*, BUF. *Der Goldammer*, BECH.

Description.—Although this bird is so well known, a description of it is rendered necessary by the fact, that young males and old females are often mistaken for each other. It is six inches and a half in length, of which the tail, which is forked, measures three inches. The beak is five lines long; in summer a dirty dark blue, in winter ash-coloured: the iris dark brown; the feet light brown, and nine lines in height. In old birds the head is a beautiful light yellow, usually marked on the cheeks and poll with a few dark olive brown spots. It is a sign of very great age, if the head and neck be a pure golden yellow. The nape of the neck is olive green; the back black, mixed with reddish grey; the rump orange. The throat and lower part of the neck, and the belly, are a beautiful light yellow; the breast, especially at the sides, and the vent, are spotted with orange and yellow. The lesser coverts are olive; the larger and hindermost pen feathers black, tinged with rust-colour; the foremost pen feathers, blackish, with a margin of greenish yellow. The tail feathers are blackish; the two external ones having on them a wedge-shaped white spot, and the centre ones being edged with rust colour.

The female is somewhat smaller; and the head and the cheeks are so covered with brown, and the neck with olive green spots, that hardly any yellow is perceptible. The breast is only spotted with rust colour, and the wing coverts mottled with reddish white. At a distance, therefore, the general appearance is rather grey than yellow.

Before the first moulting, the young males bear a close resemblance to old females, except that the throat is yellow; and that a yellow spot on the poll, and a stripe of the same colour over the eyes, is distinctly perceptible. The breast and rump also are now decidedly orange, and less spotted.

Both white and spotted varieties are occasionally met with.

Habitat.—The Yellowhammer inhabits the whole of Europe, as well as the north of Asia. In summer it frequents groves and thickets; but in autumn may be observed more in the fields, and in winter haunts barns and stables.

When confined, it is usually allowed to range the room;

but in places where it is a rare, and therefore a valued bird, it is generally kept in a large bell-shaped cage.

Food.—In summer it chiefly lives on insects, especially caterpillars, with which, like all birds of its species, it feeds its young. In autumn and winter, however, it eats all kinds of seed and grain, which, by the help of a kind of ridge on the palate, it easily succeeds in shelling. Small seeds, however, such as poppy and rape seed, it swallows whole. Oats seem to be its favourite food.

To keep the Yellowhammer healthy, it must have a change of food: for example, oats, bread crumbs, meat, poppy seed, soaked hemp seed, &c. If, however, allowed to range the room, it will thrive best on the second universal paste. I have noticed that all which I have myself kept occasionally swallow fresh black earth, I suppose in order to assist the process of digestion. They are also fond of bathing.

Breeding.—It breeds twice a year: the first time, either at the end of May or the beginning of April. The nest is built in hedges, or bushes, or even in mossy places on the ground, of grass stalks artfully woven together, and is lined with horse or cow hair. The female lays four or five eggs, in colour dirty white, spotted with light brown. When reared from the nest, the males learn to imitate the song of the Finch, as well as passages from that of other birds.

Diseases.—Decline is the disease to which these birds are most subject, though they also moult with great difficulty, and often die during the process. The best prevention of this is to feed them, during that critical period, with ants' eggs.

Mode of Taking.—In winter, the Yellowhammer may easily be caught in gardens, either by the clap net, with oats as a bait, or by a sieve, propped up with a stick, to which a string is attached. As soon as the bird is observed underneath the sieve, the support is pulled away. They may sometimes be decoyed by another bird into the barn-floor trap, and in spring are not unfrequently caught by a bird-call.

Attractive Qualities.—The Yellowhammer is a beautiful bird, although in the course of the five or six years during which it may be kept alive in confinement, the golden yellow of its plumage becomes continually paler. Its song, though in no way remarkable, is pleasant. It consists of seven or eight clear notes, *tee, tee, tee, tehee!* all of which are alike, except the last,

which is at once longer, and a third lower. This song, although not loud, may be heard at a considerable distance. The Yellowhammer, though lively and active in a state of nature, becomes shy and awkward in a cage or aviary.

ADDITIONAL.—This handsome, sprightly, and by no means uncommon bird in this country, is sometimes known as the Yellow Bunting; it is also called the Yellow Yeldring or Yoldring, Yellow Yowley, Yellow Yite, Yeldrock or Yolkring, Skite, and Devil's Bird. It is, generally speaking, a favourite species, and is very widely distributed, being found in most of the wooded and cultivated districts of Britain and Ireland, where it permanently resides. “In autumn,” says MACGILLIVRAY, “these birds form large straggling flocks, which through the winter often mingle with Chaffinches, Green Linnets, Sparrows, and other species, in open weather resorting to the fields, and perching at intervals on the hedges and bushes as well as on trees. When the ground is covered with snow, they congregate about houses, and frequent corn-yards. Their flight is undulated, light, strong, and graceful, and they alight abruptly, jerking out their tail-feathers. In spring and summer the male chants a doleful sort of ditty, composed of a few short, shrill notes, concluded with a protracted one. Towards the beginning of April, the winter associations break up, and they choose their partners without the manifestation of angry feelings, they being less addicted to quarrel than most small birds.”

During incubation, this author further informs us, “these Buntings evince much anxiety about their charge, and when deprived of their eggs or young, continue some days about the place, chanting at intervals their dolorous ditty, which, although unaltered in its notes, must doubtless be meant as an expression of their grief. In some parts of Scotland it is interpreted as signifying ‘Deil, deil, deil take ye,’ that is, the cruel nesters; and for this reason, probably, the Yellow Bunting is named the Devil's Bird.

“When perched on a tree, especially in windy weather, they crouch close to the twigs, draw in their neck, and keep the tail declined. After pairing, the male is frequently seen on a bush or tree, moving his tail by sudden jerks, by which it is raised and at the same time slightly expanded. His notes are then usually two chirps, followed by a harsher note: *chit, chit, chirr*, with considerable intervals. When feeding in the stubble fields, they advance by very short leaps, with their breasts nearly touching the ground; when apprehensive of danger, crouch motionless; and when alarmed, give intimation to each other by

means of their ordinary short note. They are generally more shy than Chaffinches, but less so than the Corn Buntings."

92. THE COMMON, OR CORN BUNTING.

Emberiza Miliaria, LINN. *Poyer, Buf. Der Gerstenammer*, BECH.

Description.—This bird, which is found throughout Europe and the northern parts of Asia, has not even the recommendations for a Cage-bird possessed by the last mentioned, as it is distinguished neither for beauty of plumage nor of song. It is rather larger than a Skylark, to which in colour it bears a strong resemblance, being seven inches and a half in length, of which the tail measures three inches. The beak is short and thick, six lines in length, and, like the feet, greyish brown, though in summer the lower mandible is yellow. The feet are ten lines high. The whole upper part of the body is a pale reddish grey, the lower part yellowish white, both, as in the Lark, being spotted with blackish brown. The pen and tail feathers are dark brown, the exterior tail feathers having on them a wedge-shaped whitish spot.

The female is somewhat lighter.

Habitat.—In some parts of Germany this bird is very common throughout the year; others are only visited by it, in its passages from northern countries, where it cannot survive the winter's cold. In March it may be seen in company with the Larks. It prefers the level country to the woods, and in meadows, or by the side of roads, may often be noticed perched on a willow tree, a large boundary stone, or even a clod.

When confined, it may either be allowed to range the room, or be kept in a large Lark's cage.

Food.—When wild, its food is the same as that of the Yellowhammer; in the aviary it may be fed on oats, millet, and the usual diet. It is, however, a more delicate bird than the Yellowhammer.

Breeding.—The Corn Bunting usually builds among the long grass, underneath bushes, but the nest does not rest upon the ground. It is constructed of grass stalks, and lined with hair. It generally contains four or five eggs, ashen grey in colour, marked with spots and stripes of black and reddish brown.

Mode of Taking.—In autumn this bird may be taken in the barn-floor trap, by help of a decoy; in spring with a bird-call; in winter, near a barn or stable, by a net, or limed twigs.

Attractive Qualities.—The song of the male is shorter and less sweet than that of the Yellowhammer, and may be expressed by the following syllables, *Tei, Tei, Tei, Tirritz!* From the harshness with which the last is given, this bird has acquired, in some parts of the country, the name of the Stocking-weaver.

ADDITIONAL.—With us this bird is a permanent resident, and in many parts of the country extremely plentiful; “it frequents,” says MACGILLIVRAY, “open pastures, grass, and corn-fields, and in its distribution seems peculiar to cultivated land or its vicinity, scarcely ever appearing on moors or mountain pastures. It is more abundant in the outer Hebrides than any other part of the country that I have visited, and there, is generally known by the name of the Sparrow. Towards the end of autumn, these Buntings collect into small flocks, and search the stubble for seeds of various kinds, especially oats and wheat. Frequently at this season they sit close, like the Larks, and allow a person to come near before they fly off; but for the most part they are shy, and not easily approached. In winter, especially in cold or boisterous weather, they appear near houses, and mingle in the stack yards with the Sparrows, Yellow Buntings, and Larks, and other small birds; but they are not so gregarious as these species, and are very seldom met with in large flocks. Their flight is strong, capable of being long protracted, undulated, being performed by alternate beatings and cessations, but heavier and more steady and direct than that of the Yellow Bunting. When surprised in a field, or roused from a corn-yard, they fly off with a direct rapid motion; but often when an individual, which has been resting on a twig or wall-top, starts away, it allows its feet to hang for a short time before it commences its bounding flight. I believe there is no other bird of the order with us that has this habit.” * * * *

“The song of this Bunting, such as it is, may be heard occasionally at all seasons, especially in calm weather, but during the breeding time it is more frequent, and then the male, perched on a wall, a stone, a twig, or a tall herbaceous plant, especially a dock or a bur, continues to utter at short intervals his singular cry, which, although not loud, extends to a great distance.”

KNAPP, in his *Journal of a Naturalist*, thus describes a destructive habit which he considers is peculiar to this bird. “In the winter season it will frequent the stacks in the farm-yard, in company with others, to feed upon any corn that may be found scattered about; but little inclined to any association with man, it prefers those situations which are most lonely and distant from

the village. It could hardly be supposed that this bird, not larger than a Lark, is capable of doing serious injury ; yet I this morning witnessed a rick of barley, standing in a detached field, entirely stripped of its thatching, which this Bunting effected by seizing the end of the straw, and deliberately drawing it out, to search for any grain the ear might yet contain ; the base of the rick being entirely surrounded by the straw, one resting on the ground, the other against the mow as it slid down from the summit, and regularly placed as if by the hand ; and so completely was the thatching pulled off, that the immediate removal of the corn became necessary. The Sparrow and other birds burrow into the stack and pilfer the corn ; but the deliberate operation of unroofing the edifice, appears to be the habit of this Bunting alone."

93. THE ORTOLAN BUNTING.

Emberiza Hortulena, LIN. *L'Ortolan*, BUF. *Der Gartenammer*, BECH.

Description.—An exact description of this bird is the more necessary, as both naturalists and birdsellers give the name of Ortolan to many distinct species. Under this name the latter offer for sale all rare birds which seem at all allied to this species.

The Ortolan is about the size of the Yellowhammer, although having a wider breast, and stronger beak. It is about six inches and a half in length, of which the tail measures two inches and a half. The beak is six lines long, and flesh-coloured ; the iris dark brown ; the feet ten lines in height, and flesh-coloured. The head and neck are a greyish olive ; the throat, and a stripe which passes from the lower corner of the beak down the neck, bright yellow. The back and the scapulars are reddish brown, spotted with black ; the rump dirty greyish brown. The under part of the body is reddish yellow, mottled with light brown ; the pen feathers dark brown, edged some with yellowish red, other with grey. The tail is blackish ; the two exterior feathers having on them a wedge-shaped white speck ; and the others being bordered with yellowish red.

The female is somewhat smaller ; the head and neck are tinged with grey, and marked with long blackish lines ; the breast is also less brown ; and the whole plumage lighter.

In the young males, before moulting, the throat is a dull yellow, mixed with grey ; the breast and belly are reddish

yellow, sprinkled with grey. They are not unlike young Yellowhammers; though a connoisseur is able to distinguish between the sexes, even in the nest.

There are also white, yellowish white, and in the aviary, even black varieties of this bird.

Habitat.—In a wild state the Ortolan inhabits the southern and temperate regions of Europe, and is not uncommon in many parts of Germany. An attentive observer will, however, remark that it is constantly upon the move; as in its passage from one climate to another, it makes frequent halts, and never takes long flights at once. This route is so uniform, that we may calculate upon seeing them every spring in the spot where they have been once observed. They fly in families rather than in flocks. They arrive in Germany about the end of April, or the beginning of May, when they may be seen in gardens, or in fields, in which are groves or bushes. Near breeding-time they frequent gardens and groves in the neighbourhood of extensive forests, especially if millet be cultivated in close proximity. In August they fly in families into the open country, and leave us after the oats have been gathered in.

The Ortolan is sometimes, as a rare and valuable bird, provided with a handsome cage; though it is frequently also allowed to range the room with other birds.

Food.—In a wild state it eats not only all kinds of insects, but also millet, oats, buck wheat, hempseed, &c.

If confined in a cage, it may be fed with millet, poppy seed, and shelled oats: if allowed to run about, it is content with the usual paste. It is, however, a delicate bird, which we rarely succeed in preserving above four years at most.

Diseases.—The disease most frequently fatal to the Ortolan is atrophy, or decline.

Mode of Taking.—In spring these birds may be easily attracted to the decoy bush by one of their own species, or a female Yellowhammer.

In August a small area of turf, near bushes, like that intended for the capture of Chaffinches, should be cleared, surrounded with a low hedge, and covered with oat ears. Near this should be placed one or more decoy birds; and also one, round whose wings is fastened a band of soft leather, which again is attached by a string to a peg in the ground, so that the bird has freedom of motion within certain prescribed limits.

It should be provided with plenty of food and water, so as to deceive the wild birds into the belief that they see one of their comrades in a place of abundance. This kind of decoy bird is often more useful than any other. The call of the Ortolan is *tzvit, tzvit ! gye, gye ! gay, gay ! pek, pek !*

Attractive Qualities.—Not only the beautiful shape and plumage of the Ortolan render it valuable in the eyes of the amateur, but also its clear and flute-like song, which resembles that of the Yellowhammer, except that the concluding notes are a tone or two lower.

These birds have long been known, and fattened as a great delicacy. For this purpose they are generally kept in a room artificially lighted, so that there may be no distinction between night and day, and fed with oats, millet, and bread, mixed with good spice. On this diet they soon become mere lumps of fat, of about three ounces in weight, and would indeed be suffocated by their own fat, if not killed at once.

ADDITIONAL.—This is sometimes called the Greenheaded Bunting; it occurs in this country only as a straggler; it was first figured by Brown, in his *Illustrations of Zoology*, from a living specimen, which was taken in Mary-le-bone Fields by a London bird-catcher; another specimen was taken at sea, a few miles off the Yorkshire coast; and two others, one killed near Manchester, and the other taken near London, make up about the sum of those which English naturalists have had an opportunity of examining.

94. THE CIRL BUNTING.

*Male. Emberiza Elacathorax, BECH. Female. Emberiza Cirlus, LIN.
Bruant de Haye, BUF. Der Zaunammer, BECH.*

Description.—This bird, which is rare in many parts of Germany, but common in Thuringia, is almost as large as a Yellowhammer, being five inches and a half in length, of which the tail measures two inches and a half. The beak is small, much compressed: on the upper mandible brownish blue, on the lower light brown; the feet eight lines in height, and flesh-colour. The upper part of the head and neck are olive green, marked with small black stripes; and a bright yellow streak runs from the upper corner of the beak, beneath the eyes, to the middle of the neck. A second streak runs down from the corner of the lower mandible, which is crossed by a

black one, which passes underneath the yellow streak under the eyes, and loses itself in the black of the throat. The back and small wing coverts are cinnamon brown, mixed with black and golden yellow; the rump feathers are olive green striped with black. The larger wing coverts and pen feathers are blackish grey; the former, as well as the hindmost pen feathers, being edged with brown, and the foremost pen feathers with greenish yellow. The tail is rather forked and black; except that the two anterior feathers have each a wedge shaped white spot on them, and all are edged with greenish yellow. Beneath the neck is a golden yellow spot; the breast is a beautiful olive green, inclining, towards the sides and belly, to light brown; the rest of the lower part of the body is golden yellow.

The plumage of the female is far lighter; the head and upper part of the neck are olive green, but more marked with black; the back is light brown; the rump more marked with black; the tail rather greyish blue than black. A yellow stripe passes both above and below the eye; and between these goes a black line, which unites with a black border round the cheeks. The throat is brownish; there is a light yellow spot beneath the neck; the breast is light olive, spotted with brown at the sides; the rest of the under part of the body is light yellow.

Before the first moulting, the young are spotted with light brown and black on the upper part of the body. The under part of the body is light yellow, striped with black, and the older they are, the more decidedly olive green becomes the breast.

Habitat.—These birds are natives of the southern and temperate regions of Europe, where they may be seen in gardens, groves, and thickets. They are birds of passage, departing in November, and returning in April. They seem fond of the company of the Common Chaffinch.

In confinement they require the same treatment as the Ortolan.

Food.—In a wild state the food consists principally of the caterpillars of the cabbage moth and other insects: of wheat, barley, oats, millet, and hemp seed.

Breeding.—The nest, which is built of grass stalks, lined with hair, is placed in road-side hedges and bushes. The female

usually lays four or five greyish eggs, mottled and spotted with reddish brown. Towards the end of July the young broods may be observed abroad, especially in cabbage fields, and the neighbourhood of willow trees.

The bird may be taken in the same manner, and is subject to the same diseases as the Ortolan.

Attractive Qualities.—The male is a very handsome bird; but its song has nothing remarkable in it. It is like that of the Yellowhammer, and may be expressed by the syllables *tzis, tzis, tzis!* *Gerr, gerr, gerr!* The call is *Tzi, tzi! Tzay, tzirr!* It is easy to tame, and will live from four to six years in confinement.

ADDITIONAL.—The Cirl Bunting was first identified and described as a British bird, by COL. MONTAGUE, in the winter of 1800; soon after which, this discriminating and indefatigable naturalist, as MUDIE justly terms him, discovered the nest of this bird, which must be sought for principally in the southern English counties, where it is permanently resident, frequenting open pastures, grass, and corn fields, and building amid the ground herbage and low bushes.

According to MUDIE, “In winter the Cirl Buntings associate with the Yellow Buntings, which they resemble in their manners, their notes, and partially also, in their appearance, only they are rather smaller, their air is softer, and their colours are more varied, and perhaps, upon the whole, finer. The voice, too, is not so loud or harsh, and the chirp of the female is particularly soft. It appears to be rather more an insectivorous bird than the more common species.”

95. THE FOOLISH BUNTING.

Emberiza Cia, LIN. Le Bruant Fou, BUF. Der Zipammer, BECH.

The Foolish Bunting is somewhat smaller than the Yellowhammer, being six inches in length, of which the tail measures two inches and a half. The beak is five lines long, very pointed, blackish above and greenish below; the iris is blackish-brown; the feet nine lines in height, and a brownish flesh-colour; the head is ashen grey, spotted with red, but marked in the middle with small black stripes, and having an indistinct streak of the same colour on each side. The cheeks are light grey, and a dirty white stripe, beginning at the nostrils, passes above the eyes; a second stripe, which is black, runs between

the eyes, and unites with a third of similar colour, which begins at the lower corner of the beak, and encircles the cheeks. The back is brownish red, spotted with black ; the rump a light reddish brown. The throat is light grey ; the rest of the lower part of the body rust-colour, which is lightest on the belly. The lesser wing coverts are dark grey ; the other feathers of the wings chiefly black ; the foremost pen feathers are, however, edged with red ; and the rest, as well as the lower coverts, have a broad margin of rust colour. The second row of coverts is tipped with reddish white, which produces a stripe of similar colour on the wings. The tail is black, and somewhat forked ; the two outer feathers have a white wedge-shaped spot on the inner plume, and the two centre ones are tipped and bordered with dark rust colour.

The female is hardly distinguishable from the male. Her head is grey, tinged with red, and spotted with black ; it is also marked like that of the male, but the streaks are less distinct, and are either dirty white or dark brown. The grey of the throat is also tinged with red, and streaked with black, and the under part of the body is in general lighter than that of the male.

Habitat.—This bird is fond of solitude, and is found throughout the mountain districts of the south of France, Italy, and Austria. During some winters it leaves these countries, and in March and April has been caught among the mountains of Central Germany.

In confinement it may either be kept in a cage, or allowed to range the room ; the latter method of treatment seems to suit it best, especially if a corner be protected by a grating, in which it can take refuge and pass the night.

Food.—In a wild state it feeds, like most birds of its species, on seeds and insects. In confinement it thrives on the food already prescribed for the Ortolan. A pair in my possession have thus been preserved in health for six years.

Mode of Taking.—This bird may easily be decoyed, by help of a Yellowhammer, to the lime-bush and barn-floor trap ; and, indeed, has received its name from its want of caution in regard to nets and snares.

Attractive Qualities.—The Foolish Buntings are handsome, lively birds. Throughout the winter their clear call, *Tze, tze!* is heard without intermission ; and from spring to autumn, their

song, *Tze, tze, tzirr, tzirr!* resembles that of the Yellowhammer, though shorter, and purer in tone. It is very friendly with the Yellowhammer if confined in the same cage, and manifests a preference for the same food.

96. THE REED BUNTING.

Emberiza Schænilius, LIN. *Ortolan de Roseaux*, BUF. *Der Rohrammer*, BECH.

Description.—This bird, which is about the size of the Common Sparrow, is five inches and three-quarters in length, of which the tail measures two inches and a half. The beak is four lines long, black on the upper side, and whitish below; the iris dark brown; the feet nine lines in height, and dark flesh-colour. The head is black, sparingly spotted with red, and round it, beginning from the lower mandible, runs a white stripe, broadest at the cheeks, and narrowest at the nape of the neck. The back of the neck is ashen grey; the back is black, spotted with rust-colour and white; the rump alternately grey, and reddish yellow. The throat is black, spotted with white; the rest of the lower part of the body dirty white, spotted on the breast and sides with brown. The small wing coverts are rust-coloured; the larger are black, but bordered in some places with rust-colour, and in others with white. The pen feathers are dark brown, edged with light rust-colour; the tail is forked and black; the two outer feathers having on the outer plume a large wedge-shaped white spot, and the centre feathers being edged with yellowish brown.

In the aviary, the head of the male becomes lighter in colour after every moulting, and acquires, in addition, a reddish brown tinge.

In the female, the head is rusty brown, spotted with black; the cheeks are also brown, and a reddish white stripe passes over the eyes, uniting itself with a second of similar colour, which begins at the lower corner of the beak, and surrounds the cheeks. A blackish brown stripe passes down each side of the neck. The throat and lower part of the body are reddish white, with numerous stripes of blackish brown on the breast; the colour of the back is lighter and less pure than in the male.

Habitat.—This bird inhabits not only the whole of Europe,

as far as Sweden, but Northern Asia also. It is a bird of passage, departing during the month of October in small flocks, and returning in March, in much greater numbers. The sexes are separated in these migrations, which has probably given rise to the incorrect statement that only the males are birds of passage. In winter they may be occasionally seen in company with the Yellowhammer. They frequent marshy and reedy places, on the banks of streams and ponds; and though seldom seen on trees, are said to climb up and down the bulrushes and tall reeds. In the aviary, they may either be confined in a cage, or allowed to range the room.

Food.—The Reed Bunting feeds not only on insects, but on reed, rush, and grass seeds.

When in confinement, it is exceedingly fond of the first universal paste mixed with poppy seed, and thrives on this diet for five or six years, though, at the expiration of that period, as I have frequently remarked, they generally die of atrophy, or scald head.

Breeding.—It builds its nest near the water, among reeds and rushes, and usually lays five or six eggs; these are greyish white, and marked with spots and indistinct streaks of dark grey, and blackish brown.

Mode of Taking.—In autumn, the Reed Bunting may be caught in the Chaffinch trap. It is found in the spring, when showers of snow are falling, in company with the Yellowhammer, near barns and dung-hills, and may be caught there, as well as in cleared spots in the fields, with nets and limed twigs. Its call is *Iss, Iss!* and it sometimes cries *Reitsha!* in a loud note.

Attractive Qualities.—The song of the Reed Bunting is alternately low and shrill, and by its simple notes, *Tete, toote!*—interrupted by an occasional harsh cry of *Reitsh!*—may be distinguished from that of every other bird. It sings throughout the summer, by night as well as by day. It is the tamest of all Buntings, and is especially fond of music. This characteristic, which I have remarked in many different birds, manifests itself by a fearless approach to the instrument, and a continual spreading out and closing of the tail and wing feathers, apparently the expression of delight. The song of the female is not so loud as that of the male.

ADDITIONAL.—The Reed Sparrow is a term sometimes improperly applied to this bird, which is also known as the Water Sparrow, the Black-headed or Ring Bunting, the Ring Bird, the Ring Fowl, and the Chink. It is described by MACGILLIVRAY as “frequenting marshy places, where it is seen perched on the willows, reeds, sedges, and other aquatic plants. Its flight is rapid and undulatory, and it alights abruptly, expanding its tail, when the white of that part becomes conspicuous. Although stationary in England, it is migratory in most parts of Scotland, departing in October, and reappearing about the beginning of April. In winter these Buntings form small loose flocks, which break up towards the end of March, when the different pairs betake themselves to their summer haunts.” The same author observes, “that it is a very active bird, and that its song, which can scarcely be called pleasant, consists of several short notes succeeded by a long one, being somewhat similar to that of the Yellow Bunting, though less harsh.”

MUDIE gives a very characteristic sketch of the habits of these handsome and interesting birds, which are entitled to a high rank in the scale of intelligence, as the following anecdote, related by Wood in his *British Song Birds*, will show. “Some years ago, when walking with a friend, I remember seeing two of these birds in an osier bed, the male perched erect at the summit of a willow stem, and his mate remaining beneath, or only occasionally coming within view. On our entering the osiers, they both flew around us in great alarm, mostly in silence, but sometimes uttering a low mournful kind of note, at the same time darting suddenly about the hedge and willow stems, as if impatient for our immediate departure; and their manners were so different from those commonly observed in the species, that we were convinced that there must be a nest thereabouts. I was well aware of the difficulty of finding the little tenement in a situation of that kind, and accordingly we both of us began to move in different directions, in order to discover by the actions of the birds where their treasure lay. My friend traversed one side of the osier bed, and myself the other; but still the loving and faithful couple remained in precisely the same spot, where the junction of two hedge-rows formed a corner; and we therefore concluded, naturally enough, that in that spot all their hopes were centered. But a close and minute investigation of the whole corner, during which time we laid the ground completely bare, revealed nothing to us. At length, a full hour after the commencement of our labours, I hit upon the nest by mere chance, at exactly the opposite end to that at which the Reed Buntings had been, and still were, pro-

cuting their whinings and manœuvres, which now proved beyond a doubt, what I had never before suspected, that the birds had been all the time endeavouring to attract our attention towards them, instead of towards their nest."

97. THE SPARROW BUNTING.

Emberiza Passerina, LIN. *Ortolan Passerin*, BUF. *Der Sperlings-sammer*, BECH.

Description.—This species has probably been confounded with the preceding, or it would have been better known in Germany, where it is not rare in the spring and autumn. It is somewhat smaller and more slender than the Reed Bunting, and is five inches long, of which the tail measures two inches and a half. The beak is black on the upper side, and light brown below ; the iris is dark chestnut ; the feet nine lines in height, and of a dusky flesh-colour. The plumage resembles in general that of the female Reed Bunting.

In the male, the top of the head is a reddish rust colour, tinged with olive grey, and spotted with black, from the original colour of the feathers, which shines through. A dirty reddish white stripe begins from the nostrils, passes over, and partly encircles the eyes, behind which it increases in width. The temples are chestnut brown, with a glimmering shade of black, which on the sides of the neck becomes a decided black spot. A yellowish white stripe runs from the lower corner of the beak, half way down each side of the neck, and loses itself behind the temples, in the reddish white streak above the eyes. The throat is black, mottled with grey ; the rest of the lower part of the body is greyish white, spotted on the sides with brown. The vent is white ; the back of the neck olive grey, tinged with red. The smaller wing coverts are a fine reddish rust colour ; the larger black, with broad edges of rust colour. The pen feathers are blackish, with a margin of olive grey, which in the hindmost becomes rust colour. The tail is forked and black, the two outer feathers having a wedge-shaped white spot, and the centre ones being edged with rust colour.

The plumage of the female is generally lighter than that of the male. There are no black stripes on the top of the head ; but similar stripes to those in the male pass over the eyes, and down the sides of the neck. On each side a blackish brown streak passes from the chin to the middle of the neck. The throat and all the lower part of the body are a dirty reddish

white ; though the vent is lighter in colour, and the breast and sides are covered with fine reddish brown lines. The back of the neck is reddish grey, and the back is covered with oval specks, of reddish grey and black.

In the aviary, the top of the head in the male becomes much lighter, and resembles that of the female, as above described. The lower part of the neck also changes to whitish grey, longitudinally spotted with blackish brown.

Observations.—The favourite haunts of this bird are the recesses of thick bushy groves, among the mountains. It is a bird of passage, which quits us in November, and returns in April. It is not uncommon in Thuringia, especially about the period of migration ; though formerly it was supposed to inhabit Russia only. In a wild state it feeds upon insects, and various kinds of grass-seed ; and when confined, may be treated like the Reed Bunting ; to which bird it also bears a strong resemblance in its song, which is not loud, but pleasant ; and it may be caught in the same manner. Its call is *Se ! se !*

(B.) FOREIGN BUNTINGS.

98. THE WHIDAH BUNTING.

Emberiza Paradisea, LIN. *Veuve à Collier d'Or*, BUF. *Der Paradiesammer*, BECH.

Description.—This rare and beautiful bird, called the Widow, on account of its colour (or, according to others, from Whidah, an African fortress, in the neighbourhood of which it is common), is about the size of a Linnet ; its length to the lateral tail-feathers is five inches and a half. The beak is lead-coloured, the iris chestnut, the feet flesh-coloured. The head, chin, front of the neck, back, wings, and tail are black. The back of the neck is light orange ; the breast, the upper part of the belly, and the thighs, white ; the vent black. The two centre tail-feathers are four inches long, very broad, and ending in a long thread ; the two next are thirteen inches long, very broad in the middle, but narrower at the end, and somewhat pointed. From the middle of this shaft rises another long filament. The other tail-feathers are only two inches and a quarter in length ; the two nearest the centre are somewhat

divergent, like the tail of a cock, wavy, and more glossy than the rest.

The female is dark brown, or nearly black, but does not attain her full plumage till the third year. When young, she resembles the male in his winter attire.

These birds moult twice a year, and the male is without his long tail-feathers for six months. The first moulting, when he loses them, is in November. He then assumes his winter plumage, of mixed black and red; the head being striped with black and white. The second moulting takes place late in the spring, but the tail-feathers are rarely perfect before June.

Observations.—These beautiful birds come from Angola, and other parts of Africa; they are lively, almost constantly in motion, and take great delight in bathing, and trimming their feathers. Their song is rather melancholy, and not loud, yet on the whole agreeable. They live from six to twelve years; and become fond of canary-seed, millet, and barley-meal, though occasionally requiring green food. They must be kept in a large cage, or the long tail will be rubbed off.

99. THE DOMINICAN BUNTING.

Emberiza Serena, LIN. *La Veuve Dominicaine*, BUR. *Der Domini Kanerammer*, BECH.

Description.—This species is smaller than the foregoing, being only six inches and three quarters in length. The beak is red; the feet grey; the upper part of the head black, with the exception of the poll, which is orange white, and is connected with a similar colour on the whole lower part of the body. The feathers on the nape of the neck and back are black, edged with dusky white. The under wing coverts are white, which causes the wings, when folded, to appear entirely of that colour, though the rest of them is black. The pen feathers are edged with white. The tail is black, having the two centre feathers pointed at the end, and more than two inches longer than the others, which gradually decrease in length towards the sides. Those next to the centre pair are tipped with white; and the two exterior feathers are white on the inner plume, and on the outer light orange.

The female is entirely brown, and the tail feathers are of equal length. Like the preceding species, this bird moult

twice a year; during which process it loses its long tail feathers, and the white of its plumage becomes dusky.

Observations.—The Dominican Bunting is a native of Africa, and a rarer and more costly bird than the Whidah Bunting. It requires, however, similar treatment. Its song is exceedingly agreeable.

100. THE SHAFT-TAILED BUNTING.

Emberiza Regia, LIN. *Veuve à Quatre Brins*, BUF. *Der Königs Ammer*, BECH.

Description.—This bird, also, is rarer than the Whidah Bunting. It is scarcely so large, measuring to the short feathers of the tail only four inches and a half. The beak and feet are red; the upper part of the body black; the side of the head, the eyes, the neck, and the lower part of the body, a yellowish red; the back of the neck spotted with black; the under side of the thighs and the vent black. The four middle feathers of the tail are from nine to ten inches long, and feathered only for two inches from the end, the remaining part being a bare quill. The others are similar in form, and brown and black.

The female is brown, and has no long tail feathers. The winter plumage of the male is grey, like the Linnet, but somewhat brighter in colour.

Observations.—These birds are brought to England, Holland, and Germany, from the coast of Africa. They are as pleasant Cage-birds as the two preceding species, and are also capital songsters.

101. THE INDIGO BUNTING.

Emberiza Cyanea, LIN. *Le Ministre*, BUF. *Der Indigo Ammer*, BECH.

Description.—This bird, about the size of a Siskin, is five inches long. The beak is a dark lead colour; the feet brown. The whole plumage is a beautiful blue, being darkest and brightest on the top of the head. The large pen feathers are brown, with blue edges; the tail of a lighter tinge of brown.

The female is very like the Linnet in colour; a remark which, at the period of moulting, applies also to the male, for the blue is characteristic of the perfect plumage. He may, however, be distinguished from his mate by the more brownish grey hue on the sides of his wings.

Observations.—These birds are natives of Carolina, but are also common in New York, where they visit the orchards, when in bloom, at the beginning of April. They chiefly frequent hilly districts. Their song, which is not unpleasant, resembles that of the Linnet. They may be kept in a bell-shaped cage, and fed on millet, canary, poppy, and crushed hemp seed.

102. THE PAINTED BUNTING.

Emberiza Ciris, LIN. *Verdier de la Louisiana*, BUF. *Der Gemalte Ammer*, BECH.

Description.—This bird is about the size of a Linnet, being five inches and one-third in length. The beak is greyish brown; the iris nut brown; the feet brown; the head and neck violet; the circle of the eyes red. The upper part of the back, and the scapulars, are yellowish green; the under part of the same, the rump, and all the lower portion of the body, red. The smaller wing coverts are violet brown, with a tinge of red; the larger are pale green. The pen feathers are brown, some edged with grey, others with red. The tail is brown; the two centre feathers being of a reddish hue, and having the outer plume of the others of the same colour.

The female is pale green on the upper part of the body; on the lower, yellowish green; the pen feathers, as well as the tail, brown, edged with green.

As this bird does not obtain its full plumage till the third year, it must naturally pass through several changes of hue. At first, male and female are uniform in colour. In the second year, the head of the male becomes blue; the rest of the plumage is blueish green, with the exception of the wings and tail, which are brown, bordered with blueish green. About the same time, the feathers of the female acquire a strong tinge of blue. Besides all this, they moult twice a year, so that it is no wonder that two birds are rarely seen exactly similar to one another. Individual birds are also found, in which all the lower part of the body, except a red spot on the breast, is yellowish; a colour which, in the moulting season, changes to white.

Observations.—The Painted Bunting is a native of all the warmer parts of Canada, and as far south as Mexico, Brazil, and Guiana, though in Carolina none are found less than 130

miles from the sea. They are only to be seen in summer, and build chiefly on orange or similar trees. Many of these birds have been brought to Europe in English and Dutch ships; and the attempt to make them breed, has succeeded with those confined in garden aviaries sufficiently spacious to contain orange trees, on which they have built. They may be fed with millet, endives, poppy, and canary seed, on which they will live for eight years, or more. Their song is soft and agreeable.

(A) INDIGENOUS FINCHES.

103. THE CHAFFINCH.

Fringilla Cælebs, LIN. *Pinson*, BUF. *Der Gemeine oder Buckfink*, BECH.

Description.—It is well known that the Chaffinch, on account of its beautiful and extraordinary song, is the favourite of most persons who keep birds. In Thuringia, especially, the passion for these birds is carried to so great an extent, and the bird-catchers are therefore so eager in its pursuit, that it is very rare to hear one in the woods with even a tolerable song. If any such should migrate from a neighbouring district, it is immediately taken by the fowler; and the young birds, thus deprived of their natural teachers, grow up into very indifferent songsters. It might therefore seem almost superfluous to give a full description of this very familiar bird, were it not for the sake of beginners, as well as for the uniformity of the work, and the observations which I may find occasion to introduce.

The Chaffinch is about the size of a House Sparrow, being six inches and one-third in length, of which the tail measures two inches and three quarters. The beak, which is conical, as is the case with all birds of this genus (*Fringilla*), is white in winter, but at the time of pairing, when the bird begins to sing, it becomes dark blue, and remains so till the moulting season. The colour of the beak is therefore a sign whether or no the bird has begun to sing. The iris is chestnut brown; the feet are nine lines in height, and blackish brown. The claws are very sharp, and must be cut every six weeks, as, if this be not done, the bird is apt to get entangled, and sometimes loses its life in this manner. The forehead is black; the top of the head, and nape of the neck, greyish blue; and

in very old birds dark blue, with a very few feathers standing up like a crest. The upper part of the back is chestnut brown, tinged with olive green ; the lower part of the back, and the rump, are Siskin green. The cheeks, throat, breast, and belly, are a reddish chestnut brown, tinged with white towards the vent. The shanks are grey ; the pen feathers bordered on the outer plume with green, on the inner with white, and white also at the root. The smaller coverts are white ; the larger black, tipped with white, from which arise two white stripes across the upper part of the wing. The tail feathers are black ; the two in the centre being tinged with ashen grey, and the two on the outside having each a large wedge-shaped white spot. All have a hardly perceptible border of green.

After the moultine season, and at the beginning of winter, almost all these colours grow lighter ; the forehead is dark brown ; the top of the head, and nape of the neck, inclining to greyish and olive brown ; and the reddish brown on the breast not so dark. Young Chaffinches of the second year—called by the bird-sellers “grey heads”—have much the same appearance, especially if of the last brood. The bird-catchers can, however, in the spring, distinguish the old from the young males without much difficulty ; the latter of which are much more prized by them, as being more docile, and capable of learning an artificial song, from some bird which has been long an inmate of the aviary.

The female, which is easily distinguished from the male, is smaller ; on the head, neck, and upper part of the back, greyish brown ; on the lower part, dirty white ; on the breast, reddish grey. The beak is greyish brown in summer, and in winter whitish grey.

There are also varieties of this bird ; White Finches, Ring Finches,—so called from a white collar round the neck,—and Spotted Finches. I possess one, in which the general colour of the plumage is dirty white ; but blackish upon the head, and Siskin green upon the back. The distinction between *Wood* and *Garden* Finches, is founded only upon the places which they frequent.

Habitat.—The Chaffinch is found all over Europe, and is exceedingly common in Germany. It may be seen wherever there are trees of any kind. It is a true bird of passage, although some occasionally pass the winter with us. Their

time of departure lasts from the beginning of October till the middle of November ; and they may be noticed returning in large flights throughout March. The males arrive in flocks by themselves, at least a fortnight before the females ; a fact of which the bird-catchers are well aware, and by which they regulate their proceedings.

The Chaffinch is generally kept in four-cornered cages, which are made of various forms, but should be at least nine inches in height. The cages which I use, and which are common in Thuringia, are made of wire, with a top of the same material, and provided with two perches, one near the seed trough, and the other by the water vessels. It is not advisable to put the Chaffinch in a very lofty cage, as it rarely hops or flies upwards, but likes to go backwards and forwards, and to be able to turn quickly. If several be kept in one room, the cages should be hung so that the birds cannot see each other, as this is detrimental to their song. Those intended to range the room, for which purpose the worst singers are usually selected, should either be provided with a space separated by a grating, or should have a fir-bough fixed in a warm place, on which they may perch ; but they rarely sing so well under this mode of treatment as when confined in a cage, where there is nothing to divert their entire attention from their song.

Food.—The food of the Chaffinch consists of seeds, grain, and insects, which they give to their young with their beaks. In winter they collect the pine and fir seeds ; as well as linseed, rape seed, oats, lettuce, cabbage and mustard seed, from the fields and gardens. Like all birds of this species, they peel the seed before eating it.

In confinement they may be fed on summer rape seed all the year round ; a diet which agrees with them exceedingly well, especially if a day's supply be always well soaked in water, the morning before it is wanted. In spring, a little crushed hemp seed (*Galliopsis Cannabina*) has a great effect in inducing the birds to sing ; but they are so fond of it, as to render it advisable not to put it in the same trough with the rapeseed, which they would waste, to get their favourite food. A little green food, especially groundsel, and in winter a slice of apple, aids the process of digestion. They are also very fond of ants' eggs and mealworms, and need fresh water for

bathing and drinking every day. Those which are allowed to range the room, are content with the common food of the aviary ; and eat bread-crumbs, meat, oats, millet, as well as linseed and rape seed. And for such, it is not necessary to soak the latter.

Breeding. — The Chaffinch's nest, which is built upon the branch of a tree, is constructed with great ingenuity. Its upper part is formed like a compressed sphere, as round as if it had been turned, and fastened to the bough by cobwebs and hair. It is composed of moss and small twigs, lined on the inside with feathers, thistle-down, and hair; and covered outwardly with the lichens of the tree on which it stands. The reason of this last-mentioned precaution is probably to elude hostile observations ; at all events, it is very difficult to distinguish the Chaffinch's nest from the trunk of the tree to which it is attached. The female hatches two broods every year, laying each time four or five light bluish grey eggs, covered with copper-coloured spots and stripes. The first brood, as indeed is the case with all birds which breed twice a year, consists almost exclusively of males ; the second as exclusively of females. Connoisseurs are able to distinguish the sexes at a very early period ; as in the males, even when very young, there is a tinge of red on the sides of the breast ; the circle of the eyes is yellower, the wings blacker, and the stripes on them whiter, than in the females ; though in other respects they resemble the mother. In order to be sure that they have not already acquired an imperfect song, they should be taken from the nest as soon as the tail feathers have begun to grow ; for shortly after this period, they begin to imitate the song of their father, or of some bird in the neighbourhood of their nest. They may be fed on bread crumbs, and soaked rape seed ; and are easily kept in health till the moulting season, when great numbers die. At this period, a diet of



ants' eggs and meal worms is the best preservative. Chaffinches thus reared, become exceedingly tame, and will sing at the word of command, or when invited to it by friendly motions of the head and hand. Their docility in learning an artificial song is much increased if they are kept in a dark place, and not brought to the window before May. By this means, even Finches which have acquired a bad natural song, may be induced to learn one considered by the amateur more perfect. The whole secret of obtaining a good songster, is to keep the cage in some dark place, where there is nothing to distract the bird's attention from its song. Instances have been known, in which Chaffinches have paired with Canaries, or even Yellowhammers. Some persons, who wish to distinguish the Garden from the Wood Finch, as a separate species, assert that the eggs of the former are whitish; the latter, greenish in colour. This mistake arises from a change which the eggs undergo in the process of incubation; as, after a certain period, all become whitish alike.

Diseases.—The obstruction of the rump gland, and diarrhoea, are the diseases to which the Chaffinch is most subject. The remedies for the former have been given in the Introduction; the latter may be relieved by putting a rusty nail, or a little saffron, in the bird's water.

To prevent the Chaffinch from becoming lame and gouty, it is often necessary to remove the scales on the legs with a penknife; an operation which requires considerable care. This bird also very frequently becomes blind, especially if fed too exclusively on hemp seed. This, however, has no pernicious influence on their song; for as the disease comes on gradually, they leave both to find their food, and hop about the perches as well as ever. If well taken care of, the Chaffinch lives for twenty years.

Mode of Taking.—By means of a good decoy the Chaffinch may be lured into the area or barn-floor trap in autumn from Michaelmas to Martinmas; and in spring, throughout the whole of March. In winter the birds which have remained behind, or arrived before the rest, may be caught by a net in open spaces strewed with oats. In spring they are generally caught by means of decoy birds fastened near limed twigs. These utter their cry, *Yak, yak! Fink, fink!*—and the wild birds in search of a mate, approach and are caught. This mode of taking may be practised as long as these birds are on the

passage ; and succeeds best in the morning, from break of day till nine o'clock, as this is the period in which the Chaffinches are on the wing, while during the rest of the day they scatter themselves over the fields in search of food, or practise their song. In the same manner may be caught Mountain-finches, Linnets, Goldfinches, Siskins, Redpoles, Yellowhammers, and Bullfinches.

The bird-catchers also make use of the jealousy of the Chaffinch, in a mode which they have of catching them. As soon as they hear a Chaffinch naturally possessed of a good note, they take a male, which frequently utters his cry, *Fink, fink!* bind his wings together, and attach to his tail a thin, forked limed twig, of about an inch in length. This bird is let loose near the tree on which the singer is perched. The latter flies down furiously upon the decoy as soon as he hears his cry, and remains fast bound to him by the limed twig. Instances have, indeed, been known, in which the decoy has been killed by the sudden swoop of the wild bird. Another, and a surer plan, is the following :—Underneath the wings of a male, trained for the purpose, is fastened a bandage of soft leather, to which is attached a thread of about a foot in length. This again is tied to a peg sunk in the ground ; so that the bird can run about in any direction within certain limits. Near the decoy limed twigs are placed in a circle, and a second Chaffinch, which is accustomed to sing in the open air, and in a covered cage, is concealed in a bush hard by. When the wild bird hears the call of the concealed Chaffinch, he imagines that it proceeds from the decoy, pounces down angrily upon him, and becomes entangled in the limed twigs. Such birds, if caught before Whitsuntide, sing in the course of the same year ; but if after that period, are not only mute, but die of grief at their separation from their mates and nestlings. The heartless conduct of those fowlers who, for the mere pleasure of the sport, persist in taking these birds at the wrong season, cannot be too severely condemned. When the young birds are fully fledged, some bird-catchers mark the places where they are accustomed to come to drink at noon, and succeed in securing them on limed twigs judiciously disposed. Such Chaffinches, because caught about St. James' Day, are called in Germany, James' Finches (*Jacobi Finken; Jopfs Finken*) ; and if they have a good memory, are not yet too old to learn a good song, and are more hardy in constitution than those taken from the nest.

Attractive Qualities.—The chief of these is undoubtedly its song. It has besides, however, different cries, by means of which it expresses its desires and wants. The cry of affection, which also seems to announce a change of weather, is *Treef, treef*; the call which it utters while on its migrations is a repeated *Yak, yak*; and the note *Fink, fink*, from which it derives its name, is heard so frequently as to warrant the conjecture that it is involuntary. Its clear, penetrating song, however, is still more remarkable than these notes, and is distinguished from that of all other birds, by its near approach to articulate speech. This is expressed in German by the word *Schlag* (*trili?*) Each bird possesses one, two, three, or even four different songs, each of which is divisible into several parts, and occupies perhaps two seconds in the utterance. As the Chaffinch is among the most prized of our Cage-birds, connoisseurs have not only observed its various songs, but noted down every syllable of them, and endeavoured to supply, by instruction, its natural defects. As I am myself a great admirer of the song of the Chaffinch, and always keep a considerable number of good singers, I should not find it difficult to write a volume on this subject. I shall, however, confine myself to what seems most important.

The names by which the various songs of the Chaffinch are known, are generally derived from the last syllable of the sentence which these birds are supposed to utter. The following, which I place in the order in which they are prized, are most esteemed in Thuringia.

1. *The double trill of the Hartz* consists of five long passages or strains, the last of which ends in the syllables “*Weingeh*” (pronounced “vine-gay”), dwelt upon at considerable length. This is a song which, if not created, has certainly been brought to perfection in the aviary; and I very much doubt if a wild Chaffinch, even in the Hartz mountains, has ever uttered it with the same degree of completeness as I have heard it at Ruhl,*

* Ruhl is a manufacturing village in Thuringia, the inhabitants of which, chiefly cutlers, are passionate admirers of this bird. It is not uncommon for them to go as far as the Hartz mountains—a distance of above eighty miles—in hopes of snaring a good bird; and they have even been known to give a cow in exchange for a celebrated singer. Hence a proverbial expression, with regard to the merits of a valuable Chaffinch, “that it is worth a cow.” A real connoisseur in Chaffinches is enraptured when he hears one which is able to sing the double trill of the Hartz perfectly;

and from birds in my own possession. It is rarely heard in all its perfection, and never, except from a Chaffinch which has been reared from the nest. On these accounts, a bird which sings it perfectly, and is moreover able to retain it in memory for a considerable time, is considered very valuable. This, and what is called the Wine song, are the favourites among the Chaffinch connoisseurs at Ruhl.

2. *The Reitzug*, or *Reitherzug*, of which there are two kinds. The first has been introduced into Thuringia from Eizgebirge and the Voigtland, the mineral districts of Saxony, to which it properly belongs. It may, indeed, be occasionally heard in wild birds on the eastern part of the Thuringian forest; but trained birds sing it more fully and perfectly. It is a powerful, sonorous song, consisting of four short phrases, the first of which ought to be given in a very high note; and the last ends with the syllables *Reitzug*. Before this, however, a cadence should be introduced, to make the performance quite perfect, and the whole should end with a sharp *Tzap*, or, as connoisseurs call it, a snap. The second variety of this song is peculiar to Breitenbach and the Oberland, and is longer and more flute-like in tone than the former. The last syllable, too, is said to be *Rietza*, instead of *Reitzug*, in accordance with the provincial pronunciation of Thuringia. Both these are excellent songs, and one who had not heard the double trill of the Hartz, would find it difficult to believe that a bird's song could be more perfect. Still on this, as on every other subject, it is impossible to account for differences of taste.

3. *The Reihahn*. This song, which may frequently be heard in the mountainous districts of Saxe Meiningen, and especially in Steinbach and Lanscha, must not be confounded with the preceding. It consists of one long, sharp passage, beginning on a high note, and rapidly descending to the concluding syllables *Reethahn*, or *Riethahn*, followed by the usual *Tzap*. It is a good and striking song.

4. *The Weidmann*, or *Sportsman's Song*. Of this there are two varieties, the Cage and the Wood Song, the former of which and I have often heard them say, that one possessing this song might easily be taught to speak—so distinct a pronunciation of the various syllables does it require. The rage for Chaffinches in Thuringia is not confined to Ruhl, but extends, in greater or less degree, to the neighbouring villages of Tambach, Schmalkalden, Breitenbach, and Steinbach.

is common in the Voigtländ. At a distance it sounds like the Bridegroom's Song, but the preliminary passages are louder, sharper, and more distinctly separated, while the concluding syllables are an exact repetition of the words *Weidmann, zieh aus* (Sportsman, march out). The Wood Song is neither so long nor so full, and is only occasionally heard in the forests of Franconia.

5. *The Wine Song*, of which there are five varieties : First. The Good or Langsfeld Song, which is an exceedingly beautiful strain, and heard to perfection only in a few villages of Thuringia, especially in Ruhl. The genuine song consists of four short phrases, warbled in a tone resembling that of the hautboy, and ending in the syllables *Weingeh*, or *Wiengeh*. As this song also is one which has been accidentally acquired in the aviary, and thence propagated by careful training, it is never perfectly heard from a wild bird. Second. The Bad Wine Song, so called only when compared with the preceding, consists of three passages, of which the second is composed of the syllable *Tzap*, five times repeated, and the last is the word *Weingeh*. This is a natural song, and birds which possess it are much sought after by the bird-catchers. Third. The Straight or Even Wine Song is a strain compounded of the Bad and the Sharp Wine Song, of which the last syllable is uttered in a shrill decided tone. It is by no means unpleasant, and is frequently heard from wild birds in Franconia, especially in the neighbourhood of Meiningen. Fourth. The Sharp Wine Song, which never terminates in *Weingeh*, but in a distinct and elongated *Weingeh*. It is divided into (a), *The Common*, which is a wild song, and when genuine, consists of the syllables *Fritz, Fritz, Fritz ! willst du mit zum Wein gehen ?* (Fred, Fred, Fred ! wilt thou go with (us) to the wine?) and (b), *The Ruhl Sharp Wine Song*, an artificial strain, common in Ruhl and the neighbouring villages of Thuringia. This consists of three phrases ; the first of which is given in a very high note, and on the last, or two last of which, a decided accent is laid. The connoisseurs of Ruhl distinguish two varieties of this song, named, from villages in the neighbourhood, the Langsfeld and the Winshauser songs. Both of these are very good songs ; the last especially being very sonorous, and having two strongly accented syllables before the concluding *Weingeh*. The fifth variety of the Wine Song is the Oberland Wine Song, which

is very much esteemed in the village of Lanscha. It is a sharp Wine song, consisting of three loud and rapid passages, concluding in the syllables, *Weid*, or *Weingeh*, followed by a sharp *Speck!*

6. *The Bridegroom Song*: there are two varieties of this, the first of which is altogether an artificial song. It consists of two phrases: the first soft and high, the second sonorous, and ending in a crescendo. The syllables of which it is said to be composed are *Fink, fink, fink, fink, willst du denn mit dem Bräutigam zieren?* (Finch, &c. wilt thou adorn thyself with the bridegroom?) The second, or inferior variety, is a natural but agreeable song, and consists of three parts.

7. *The double trill* consists of two long phrases, termed a "turn," or "shake," separated from one another by a cadence: of this there are three varieties. *First*, the common double trill, which is again divided into *a*, the double trill of Schmalkalden: *b*, the clear: *c*, the long: and *d*, the short double trill. These are natural songs; and the bird which is able to sing either *a* or *b*, is sure to become the prey of the fowler. *Second*, the double trill of Tambach—a peculiar song, invented for itself by a young bird, which was set to learn the common double trill—consists of notes so deep and loud, that no one unacquainted with the capabilities of the Chaffinch, would believe that it could possibly utter them. The bird begins in a low tone, which changes into a crescendo; introduces between the two passages a third passage, consisting of five shrill notes, and he repeats the word *Pfaff* several times, and concludes by dwelling on the word *Reedidia*. A bird which can sing this double trill, either alone or in conjunction with the Bridegroom song, is considered very valuable. *Third*, the Schüttel Zwetscher, a double trill common in the mountainous districts of Meiningen, especially in the villages of Steinbach and Lanscha. It is like the common trill, except in being an artificial song, and consists of two long, distinct passages, ending in the syllable, *speck*.

8. *The Goodyear* (*Gutyahr*), so called from its last syllable. The varieties are, First, the common Goodyear, consisting of two parts, the latter of which must consist of five turns or shakes, ending with the word *gutyahr*. This is a natural and not uncommon song. Second, the Goodyear of the Hartz, an artificial song, consisting of two passages, which are more won-

derful than pleasant. Chaffinches which unite with this song the sharp wine song of Ruhl, are rare and valuable, and chiefly to be met with in Ruhl and Eisenach. Thirdly, when the last note of this song is not *gutyahr*, but *witzia*, it is called by this name. The preceding passages are the same as in the Good-year song. This is a variety very common in Franconia.

9. The *Kienochl*, or *Quakia*, which also derives its name from the concluding note. There are two varieties of this: the double and the single *Quakia*; the former consisting of two passages, the latter only of one. This, which is a natural song, though very much improved by training, was once highly prized, but is now gone quite out of fashion, being superseded by the Good Wine song. I believe that I possess the only bird which is now capable of executing it. It ought to be joined, as is the case with every Chaffinch, with a clear double trill.

10. The *Parakikah*. No word is ever more distinctly uttered by Chaffinches than this, which occurs in a song not uncommon in Franconia and the west side of the Thuringian forest. As a natural song, it consists of two; when improved by training, of three passages, and concludes with the usual *Tzap*.

11. The *Pithia*, or *Trewethia*, is a rare but agreeable song, not unfrequently to be heard in the remotest parts of the Thuringian forest. When perfected by training, it consists of a single sonorous passage, followed by the frequent repetition of the syllable, *Tzach*, and concluded by the word *Trewididac*. At one time, birds which united this with the common Sharp Wine song, were very much prized.

12. The *Schwarzgebühr*, a natural song, not uncommon about Sonnenberg and Steinach. When improved by the education of the aviary, it consists of three passages, in the last of which the word from which it derives its name is very distinctly heard. It is concluded with the syllable, *Pink*. A bird whose natural song this is, is frequently taught the Reitzug, and if perfect in both, is considered very valuable.

The above varieties of the song of the Chaffinch are those which are most prized in Thuringia, Saxony, and Franconia. Many of these, as I have said, may be heard from wild birds, but not so perfectly as from those confined in the aviary. If a bird possesses but one of these songs, it generally sings more slowly, distinctly, and with more depth and loudness, than

when its acquirements are more extensive; and those are very highly esteemed indeed which add to the end of their song one of the syllables, *Pink* or *Tzap*, which the bird-fanciers call the Amen. There are, however, many other varieties, besides those already mentioned, the names of which it is hardly worth while to repeat. It is remarkable, that the song of these birds varies, according to the district which they inhabit; and therefore that some songs are much more common in Thuringia than in the Hartz mountains, and *vice versa*. In Austria, again, where also this bird is a favourite, several songs are specified as the admiration of connoisseurs; which, as far as we can judge from the names, are not the same as those common with us.

The Chaffinch, when reared from the nest, is so docile, that it is able not only to acquire the song of another bird of the same species, but to produce an imperfect imitation of the notes of the Canary and Nightingale. In it, also, as in all other Cage-birds, may be noticed great natural variations in memory; for while one bird is able to repeat a song which it has heard but once, at least six months' study is necessary in order to enable another to accomplish the same. One is able to learn only a single variety of song, another acquires several; one is never able to repeat perfectly what it has learned, another will not only do this, but add notes of its own invention.

Another peculiarity of these birds is, that every year they relearn their song in a very singular manner. For four weeks or more in spring, they are said to *record*; to utter, that is, a continual murmuring or chirping, with which by degrees they intermix detached passages of their song. It is considered a great proof of excellence in a Chaffinch, if this process last only a week or a fortnight, and the song be reproduced in all its perfection at the end of that period. Other birds, which sing only at certain seasons of the year, begin by repeating their song in a low and uncertain tone, and introduce into it the notes of other birds; but in none is the recording so entirely different in character from the usual song. Attentive observation enables us to conclude that this recording is not to be considered as a practising of the song, but rather as an exercising of the physical powers of the throat and larynx, which for some months have been but little used. Wild Chaffinches begin to record immediately after their arrival in spring; those

confined in aviaries commence as early as the beginning of February, and sometimes continue the exercise for two months. The period during which they sing usually terminates in June, though some, which have been reared from the nest, will prolong their strains until Michaelmas.

In order to make the Chaffinch sing by night as well as by day, and to give its notes a greater depth and clearness, some bird-fanciers are guilty of a shameful act of cruelty. They first accustom the bird to find its food in the dark, by shutting out the light from the cage, and then with a red-hot needle either glue the eyelids together, or pierce the pupil, and so deprive the unfortunate prisoner of sight. Such conduct cannot be too strongly deprecated.

The Chaffinch seems to be in general a docile bird, and to possess other capabilities than that of song. A travelling Alsatian, Jeantet, had one in his possession which was able to distinguish and compare letters, figures, and colours; though it seemed to be scarcely as well acquainted with its lesson as the Canaries which were exhibited at the same time.

ADDITIONAL.—**YARRELL** remarks, that “the male Chaffinch is one of the most handsome of our common small birds, and in his general deportment is as lively as he is handsome. Thus distinguished by bright colours and active habits, and being besides very numerous as a species, and confident in behaviour, allowing the near approach of observers, without exhibiting much alarm; the Chaffinch is extremely well known, and as his gay appearance and song frequently noticed as early as February, points him out as one of the first of our indigenous birds, to afford an indication of returning spring, he is for these various reasons a general favourite. With our continental neighbours, the Chaffinch is one of their most common Cage-birds; and in France, from the lively colours and demeanour of this bird, the term ‘gay as a Chaffinch,’ is a proverbial phrase in frequent use.

“The Finches, generally, are remarkable for the neatness and beauty of the nests they construct, and the Chaffinch is no exception to the rule. The outside of their nest is composed of moss, studded with white or green lichens, as may best accord with the situation in which it is built; the inside is lined with wool, and that is again covered with hair and some feathers. The eggs are usually four or five in number, of a pale purplish buff, sparingly streaked, and spotted with dark reddish brown. The place chosen is variable; sometimes it is fixed in the fork of a bush, in a hedge-row, on a branch of a wall-fruit tree, fre-



Stewart del.

Llars sc.

MOUNTAIN FINCH

quently in an apple or pear-tree, several feet above the ground. A correspondent in the *Field Naturalist's Magazine*, relates that a pair of Chaffinches built in a shrub so near his sitting-room window as to allow him to be a close observer of their operations. The foundation of their nest was laid on the 12th of April, the female only worked at the nest-making, and, by unwearyed diligence, the beautiful structure was finished in three weeks; the first egg was deposited on the 2d of May, four others were subsequently added, and the whole five were hatched on the 15th. During the time of incubation, neither curiosity nor constant observation from the opened window disturbed the parent bird; she sat most patiently; the male bird often visited his partner, but it was not discovered whether he ever brought her food."

It is said by LINNÆUS, in his *Fauna of Sweden*, that the female Chaffinches migrate from that country in winter, but that the males do not, and the name of *Cælebs*, the bachelor, was bestowed by him on this species, in reference to this circumstance. SELBY and WHITE, as well as other English naturalists, have noticed this separation of the sexes, "which," says BOLTON, "it is difficult to account for; perhaps the males being more hardy and better able to endure the northern winters, are content to remain in the country and pick up such fare as they can find, while the females seek for subsistence in more temperate regions."

With WATERTON, it may be observed, the Chaffinch is a prime favourite, as, indeed, from its beauty, liveliness, and docility it well deserves to be. Twink, Shelly, Shell-apple, Chaffy, Boldie, and Beech Finch, are the names by which it is known in different localities; in Scotland they call it the Shilfa, under which name several of their poets have alluded to the bird.

104. THE MOUNTAIN FINCH.

Fringilla Montifringilla, LIN. *Pinson d'Ardennes*, BUF. *Der Berg Fink*, BECH.

Description.—The Mountain Finch is six inches and a quarter in length, of which the tail measures two inches and a half. The beak is half an inch long; brown in winter, and in summer yellow, tipped with black. The feet are nine lines in height, and dark flesh colour. The feathers of the head and throat are bright black, with a border of dark reddish yellow, which becomes less marked as the bird advances in age. The belly is mottled with white; the feathers of the back are black, with a broad margin of dark yellow. The rump is

white ; the top of the neck and breast, as well as the lesser wing coverts, orange ; the larger wing coverts black, tipped with white. The pen feathers are dark brown, edged with yellow ; the tail somewhat forked, and black.

The colours of the female are less diversified. The black of the male is exchanged in her for brown ; and the orange is tinged with grey. Varieties are also found with a white head, back, &c.

Habitat.—This bird is common throughout Europe, but in the summer chiefly inhabits the extreme north. In spring, autumn, and winter, it may be found in all the German forests, and has been seen in immense flocks in Thuringia, in seasons when beech mast was abundant.

It may be either confined in a cage, or allowed to range the room, according to its rarity, and the consequent estimation in which it is held.

Food.—The reader is referred to the directions given in the case of the Chaffinch.

Mode of Taking.—The call of the Mountain Finch is “ *Yack, Yack, Qvääk;* ” and as the two first syllables of this resemble the call of the Chaffinch, the same decoys may be used for both. Great numbers both of this bird and the Chaffinch may often be caught in the barn-floor trap. In winter it may be taken either with a net or under a sieve.

Attractive Qualities.—The song of the Mountain Finch is not agreeable ; consisting merely of a few chirping and twittering notes—like the recording of the Chaffinch—occasionally interrupted by a sonorous *Raitch!* If kept with Chaffinches for several years, it learns portions of their song, but never perfectly ; and, indeed, its chief use to the bird-fancier is as a decoy. If kept on account of its beauty, and allowed to associate with other birds, it must be very abundantly supplied with food, as it is of a very quarrelsome disposition. It is said, however, that it may be tamed with less difficulty than the Chaffinch.

ADDITIONAL.—The Mountain Finch, or Brambling, as it is more commonly called, visits this country in the winter season only, and is then pretty generally distributed, extending as far as the extreme southern counties of Dorset and Devonshire. MR. CROUCH includes it in his Cornish Fauna. THOMPSON reports, that it occurs in various parts of Ireland ; and of the

Scotch naturalists, SIR W. JARDINE has met with it in Dumfriesshire ; and MACGILLIVRAY mentions having observed a flock of the birds in some beech-trees about a mile from Corstorphine, near Edinburgh. The following is MUDIE's account :—“ Like the Siskin, the Mountain Finch is irregular both in the times of its appearance and in its numbers. It is, however, much more frequently seen than the Siskin, and resorts to more places of the country.

“ As the Snow Bunting has, in some stages of its plumage, been called the Mountain Finch, that has occasioned a little confusion between it and the species under consideration ; but the two are so distinct in all their characters, that one cannot be mistaken for the other. The proper Mountain Finch is sometimes called ‘ the Brambling.’

“ It is not quite so large as the Snow Bunting ; but it is a stout-made bird, which would lead one to conclude that, though it may, as is reported, nestle in the pine-trees, it is, in its manner of feeding, more a bird of the open air than of the forest. While in this country, his habits correspond, as it does not resort so much to the trees and copses, and feed on those buds, as the Siskin, but keeps more to the open fields, with the Chaffinches and Yellow Bunting, though, like the Chaffinches, they frequently alight in trees, and consume the various fruits and seeds that are found on these, but rarely the buds, and prefer evergreens for roosting at night.”

In BEWICK'S *History of British Birds*, it is mentioned, that the Mountain Finch has been seen in the Cumberland Hills as early as the middle of August ; this, however, was quite an exceptional case. MR. SCALES, an agriculturist, of Beecham, in the county of Norfolk, considered them of great service to his land, as they devoured in great abundance the seeds of the knot-grass (*Polygonum aviculare*). “ In severe weather,” says YARRELL, “ large flocks of them are observed to feed upon beech mast ;” and PENNANT, in reference to the number which occasionally fly together, mentions that he once had eighteen sent him from Kent, which were all killed at one shot. According to a notice in Loudon's *Magazine of Natural History*, one of these birds was shot on the 6th of May of that year, in a fir plantation about four miles east of York. But it does not appear that any collector has been able to procure the eggs of this species, nor that they can be induced to breed in a state of confinement here.

105. THE HOUSE SPARROW.

Fringilla Domestica, LIN. *La Moineau Franc*, BUF. *Der Hans Sperling*, BUCH.

Description.—Although this and the following species can-

not be reckoned among those which are pleasant in a room, I have thought it advisable to insert a description of them here, as they are easy of preservation, and display many attractive qualities, not possessed by birds more generally admired for their beauty and song.

The House Sparrow is five inches and three quarters in length. The beak is thick, and blackish blue; the feet greyish brown. The top of the head and the cheeks are ashen grey, though the part round the eyes is black, and a broad reddish brown stripe passes behind them. The back of the neck is grey; the back reddish brown, spotted with black. The throat is black; the breast black, mottled with white; the belly greyish white. The lesser wing coverts are reddish brown; the last row but one of the larger coverts is edged with white; and the last with reddish brown. The pen and tail feathers are dark brown.

The female is very different; being reddish grey on the upper part of the body, spotted with black on the back. The under part of the body is dirty whitish grey. The young birds resemble the females till after the first moult. Several varieties are said to exist,—for example; white, yellow, black, blue, ashen grey, and speckled Sparrows.

Habitat.—It is hardly necessary to say that in its natural state, this bird is the familiar companion of man throughout Europe. If confined, it may be allowed to range the room during the day, and will soon learn to take up its quarters at night, in any sleeping place that may be provided.

Food.—It is, unfortunately, but too well known, that the Sparrows commit great depredations on wheat and barley fields, cherry trees, rows of peas, &c.; but, on the other hand, they are very useful to the gardener, in destroying,—during the breeding season—an immense number of beetles and caterpillars. In confinement they will eat almost any thing, oats, rape, hemp, poppy seed, &c.

Breeding.—They build under roofs, in crevices of walls, deserted Swallow's nests, &c. &c. The female lays six or seven eggs, two or three times a year.

Mode of Taking.—The House Sparrow is a cunning bird, and it is difficult to catch it either with a net or by means of limed twigs. In autumn, however, they may be taken in great numbers by marking the bushes on which they perch,

and covering them with bird-lime. They may sometimes also be caught, by covering with a net a cherry tree which is nailed to a house, when they have retired to rest for the night.

Attractive Qualities.—If many birds be confined together in a room, it may be worth while to admit a Sparrow or two, especially, as they breed freely with the Tree Sparrow. For this purpose, a male of the House Sparrow, and a female of the Tree Sparrow must be selected, and placed in some retired corner, provided with a box, or artificial nest in which to build.

The House Sparrow, especially in winter, may be taught without difficulty, to leave the house and return at call. All that is necessary for this, is to keep it for a month in a large cage at the window, plentifully provided with good food, such as millet, meat, bread, &c. In such a cage it will sometimes breed. An inmate of the Hôtel des Invalides, at Paris, is said to have made a Sparrow so tame, as to leave it perfectly at liberty without any fear of losing it. It was ornamented with a small bell round its neck. It would not allow itself to be touched by any other person, yet was so fond of its master, that it could not be induced to leave him, when at last he became bed-ridden. On one occasion it was caught and deprived of its bell, but after two days made its escape. It was, however, melancholy, and refused all food, till a new bell had been provided. A clergyman in Paris, also, is said to have had two Sparrows, father and son, which were able to repeat the fourth, fifth, sixth, and seventh commandments. It produced a highly comic effect, when in their quarrels over their food, one of them would gravely admonish the other—“*Tu ne voleras pas.*” (Thou shalt not steal.)

ADDITIONAL.—Of this well-known type of the great Passerine family, which we hear chirping and twittering around us from morning to night, and at all seasons of the year, KNAPP, in his *Journal*, justly remarks, after alluding to the fecundity of the bird, which enables it to maintain its numbers, notwithstanding the hostile attacks to which it is exposed, “we have scarcely another bird, the appetite of which is so accommodating in all respects as that of the House Sparrow. It is, I believe, the only bird that is a voluntary inhabitant with man, lives in his society and is his constant attendant, following him wherever he fixes his residence. It becomes immediately an inhabitant of the new farm-house, in a lonely place or recent enclosure, or even in an

island ; will accompany him into the crowded city, and build and feed therein, content, unmindful of the noise, and the smoke of the furnace, or the steam-engine, where even the Swallow and the Martin, that flock around him in the country, are scared by the tumult, and leave him ; but the Sparrow, though begrimed with soot, does not forsake him ; feeds on his food, rice, potatoes, or almost any other extraneous substance he may find in the street ; looks to him for his support, and is maintained almost entirely by the industry and providence of man. It is not known in a solitary and independent state."

YARRELL observes, that "occasionally the Sparrow builds among the higher branches of apple or pear-trees in a garden, sometimes in other trees, but seldom choosing one that is far from a house ; and the nest, when thus placed in a tree, is remarkable for its large size, as compared to the bird ; it is formed with a dome, and composed, as in other cases, of a mass of hay, lined within with a profusion of feathers, to which access is gained by a hole in the side. So great is the partiality of the Sparrow for warmth, that abundance of feathers are used even to line a hole on the inner side of the thick thatching of a barn, and they have been seen collecting feathers in winter, and carrying them away to the holes they inhabited. Their young are fed for a time with soft fruits, young vegetables, and insects, particularly caterpillars, and so great is the number of these that are consumed by the parent birds, and their successive broods of young, that it is a question whether the benefit thus performed is not a fair equivalent for the grain and seeds required at other seasons of the year."

This author also quotes an anecdote from vol. i. of the *Zoological Journal*, in proof of the Sparrow's attachment to its young : it is there stated, that "a pair of Sparrows, which had built in a thatch roof of a house at Poole, were observed to continue their regular visits to the nest long after the time when the young birds take flight. This unusual circumstance continued throughout the year ; and in the winter, a gentleman who had all along observed them, determined on investigating its cause. He therefore mounted a ladder, and found one of the young ones detained a prisoner, by means of a piece of string or worsted, which formed part of the nest, having become accidentally twisted round its leg. Being thus incapacitated for procuring its own sustenance, it had been fed by the continued exertions of its parents. Similar instances are recorded in other works on natural history."

MR. KIDD, of Hammersmith, states that the Sparrow is a fine songster, when placed under proper tutelage, equalling, if not excelling the Canary. It is certainly a classical bird, celebrated by

the poets ; the old English dramatist, JOHN LILLY, gives to the mother of Cupid a team of Sparrows ; the German poet, BÜRGER, welcomes the bird to his hall in some fine flowing lines ; and the musical plaint of CATULLUS for the death of Lesbia's Sparrow, must be sufficiently familiar to most of our readers.

106. THE TREE SPARROW.

Fringilla Montana, LIN. *Le Fripet*, BUF. *Der Feldsperling*, BECH.

Description.—This bird, which is handsomer than the foregoing, is about five inches and a half in length. The beak is blackish brown ; the feet blueish flesh colour. The top of the head is reddish brown ; the cheeks white, but each having a black spot. A ring of white encircles the nape of the neck. The upper part of the back is spotted with rust colour and black ; the lower part of the back and the rump, are brownish grey. The throat is black ; the breast light ashen grey ; the belly dirty white. The pen and tail feathers are dark brown. The smaller wing coverts are rust coloured ; the larger ones black, but edged with rust colour, and tipped with white, which produces two transverse streaks of white on the folded wings. Several varieties of this bird are mentioned ; as, for instance, the white and the speckled Tree Sparrow. In the latter, the upper part of the body, the wings, and tail, are yellow ; the throat is black, and the head brown.

Habitat.—The Tree Sparrow is a native of Northern Asia and America, and of most European countries. It is, however, not so common in Germany as the last-mentioned species, as there are several districts in which it is quite unknown. It frequents gardens and fields, where the trees and hedges are thick, and in autumn may be seen in great swarms in the wheat and barley fields.

It may be allowed to range the room like the House Sparrow. Its feet, however, are so short, that its method of locomotion is exceedingly ungraceful.

Food.—In this respect, the same remarks apply as in the case of the House Sparrow.

Breeding.—It builds in hollow fruit trees, and willows by the side of streams, and produces two broods a year.

Mode of Taking.—It may be caught in the same manner as the House Sparrow ; though, being less shy, it can often in winter be taken under the sieve.

Attractive Qualities.—The chirping song of the Tree Sparrow, when heard among the notes of other Cage-birds, is not disagreeable. It may be tamed like the House Sparrow, but does not live so long in confinement, usually dying of decline.

ADDITIONAL.—This pretty and lively bird, which is sometimes called the Mountain Sparrow, is with us somewhat rare, and of local distribution ; it does not appear to have been observed further northward than Newcastle. In many of its habits, as well as in appearance, it greatly resembles the House Sparrow, for which it is no doubt frequently mistaken. Its common call note, too, is not unlike that of the last named bird, being a monotonous chirp, somewhat more high and shrill, however. Of its song, Mr. BLYTH says that “ it consists of a number of these chirps, intermixed with some pleasing notes delivered in a continuous, unbroken stream, sometimes for many minutes together, very loudly, but having a characteristic Sparrow-like tone throughout.”

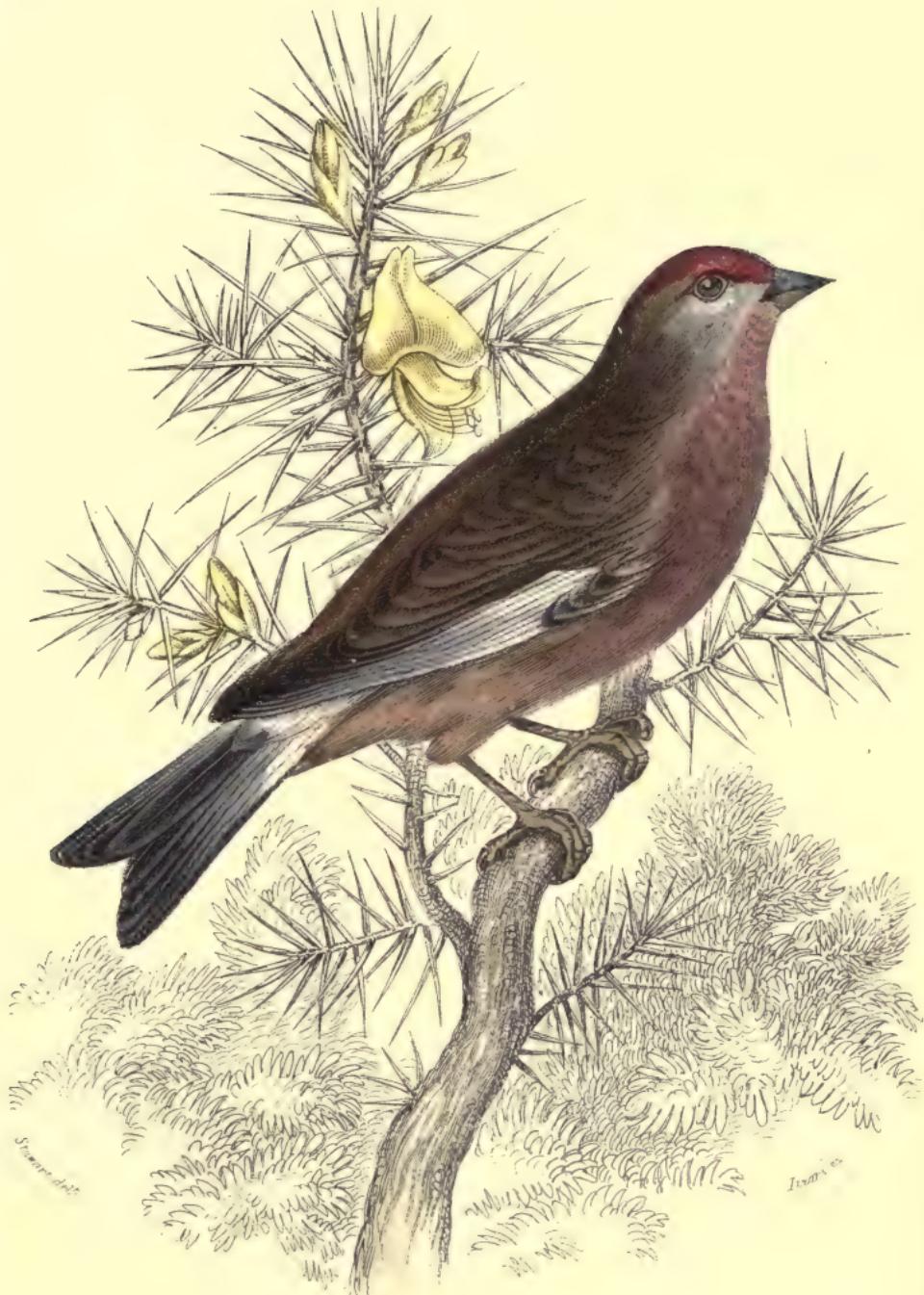
According to SELBY, it is a bird of retired habits, and is never (say not often) found to frequent villages or other dwellings, like the common species, but is generally to be met with where old trees (particularly pollards, hollowed by decay) are abundant, as in the holes of these it finds a congenial retreat, and proper situation for its nest, of which the materials are hay and straw, intermixed with a lining of feathers.”

These birds have been known to build in the thatch of a barn, in company with the House Sparrow, and also to occupy the deserted nests of Magpies and Crows, and the hollow of a tree which had once been the home of the Woodpecker.

107. THE LINNET.

Fringilla Cannabina et Linota, LIN. *Linotte*, BUF. *Der Hänfling*, BECH.

Description.—This well-known bird is more than five inches in length, of which the tail measures two inches and a quarter. The beak is six lines long, dirty blue in summer, and in winter whitish grey, tipped with brown. The iris is dark brown ; the feet are black, and eight lines in height. The plumage of the male Linnet varies exceedingly at different ages and seasons of the year, a fact which not only leads to mistakes and unfair dealing on the part of bird-sellers, but has produced great confusion in works on ornithology. My own observations, which have been very carefully made and extend over a period of many years, have resulted in the conclusion that the Common Linnet (*Fringilla Linota*, LIN.), the Greater Redpole (*Frin-*



ROSE LINNET

gilla Cannabina, LIN.), and the Yellow or Mountain Linnet (*Fringilla Montana*, LIN.), are one and the same species.

A male of three years old answers in spring to the following description, and is known by the name of a Greater Redpole. The forehead is blood-red ; the rest of the head reddish ashen grey, spotted on the poll with black, and on the cheeks, the sides of the neck, and round the eyes, with reddish white. The feathers of the upper part of the back are rusty brown, bordered with a lighter shade of the same colour ; the lower part is mottled with grey and white ; the upper tail coverts are black, edged with reddish white sparingly spotted with reddish grey. The feathers on the sides of the breast are blood red, edged with reddish white ; the sides of the belly light rust colour ; the rest of the lower part of the body reddish white. The first row of coverts are black, edged with reddish white ; the rest are rusty brown, with margin of a lighter hue. The pen feathers are black, tipped with dirty white, the first row being edged with white almost up to the points. The white margin of the narrow plume forms a stripe parallel with the pen feathers. The tail is forked and black ; the four external feathers having on each a deep margin of white, which in the two centre feathers is narrower, and tinged with red.

After the autumnal moultling, the red on the forehead disappears, and the same hue on the breast becomes less conspicuous, as the reddish white margin of the feathers are broader ; the colours, however, recover their brilliancy in the course of the winter.

Males of one year old have no red feathers on the head, on which also the black spots are more numerous. The breast is light rust colour, though not of a uniform shade throughout, which arises from the fact that the inner side of the feathers is of a shining greyish brown, more or less conspicuous, according to the position of the bird, while their edges are, as before, reddish white. The rust colour of the back, also, is spotted with dark brown and reddish white. Such birds are known under the name of Grey Linnets.

After the second moultling, specks of blood red may be observed on the under side of the reddish grey feathers of the forehead ; and the red of the breast is concealed only by the broad yellowish white margins of the feathers. These are the Yellow, or Rock Linnets, as they are called in Thuringia. Bird-

sellers, however, give the name of Yellow Linnets to those birds, also, in which the red on the breast and forehead is replaced by a bright orange; but this is merely an effect of old age, or sickness during moulting; and such birds are often the finest singers. I have myself caught several, and have always endeavoured to preserve them. Their song was clear and beautiful; but they were all remarkably shy and wild, and soon died of grief, from which I concluded that they were very old. Besides those which I have enumerated, less marked distinctions of colour may be observed among Linnets, indicative of their various ages, and the different seasons of the year. As a general rule, the older the bird, the redder is it upon the head.

Those which are deprived of their liberty when very young, never acquire this beautiful red colour on the head and breast, but always resemble the one-year old, or Grey Linnet. Birds, also, which have been caught when old, lose their beauty after the first moulting, and acquire the grey plumage. No variation of colour is observable in the female, which is somewhat smaller than the male. The whole upper part of the body is green, spotted with blackish brown and yellowish white; the rump and breast, especially the latter, are spotted with greyish brown and reddish white; even in the nest she may be distinguished by the colour of her back, which is rather grey than brown, and by the numerous spots on the breast, which bears a close resemblance to that of the Lark.

Habitat.—The Linnet is a well-known bird all over Europe. During the summer it frequents woods, groves, &c., and in autumn betakes itself to the open fields. It is a migratory bird, passing in winter from one place to another in search of food. In March, by which time it has usually paired, it may be noticed in its usual haunts.

It may be confined either in a bell-shaped, or a small four-cornered or Chaffinch cage, in the latter of which it usually sings better. It is not advisable to allow it to hop about the room, as it is a very quiet bird, sitting still in any place, and therefore liable to be trodden upon. If, however, the aviary be furnished with small trees or branches, it will hop from one to the other of these, and never descend except to eat and drink.

Food.—In a wild state, the Linnet feeds on all kinds of seeds,

which it shells and softens in its crop, before digesting them. It is especially fond of rape, cabbage, hemp, poppy, and linseed.

In confinement, it needs only summer rape-seed, which it is not necessary to soak, as the Linnet is a bird which feeds on seeds alone, and consequently has stronger digestive powers than the Chaffinch. Hemp-seed does not agree with it; and it is curious that winter rape-seed, of which, when wild, it eats with impunity, is almost poisonous to it in confinement. They must not be fed too abundantly, on account of their naturally plethoric habit of body; and a little salt mixed occasionally with their food, will be found a preservative against many diseases. Such as are allowed to range the room, will eat the same universal paste as the other birds. A little green food is sometimes advisable, and they are fond of bathing, either in sand or water.

Breeding.—The Linnet breeds twice a year, the female laying each time five or six blueish white eggs, thickly marked with flesh-coloured and reddish brown specks and stripes. The nest, which is most frequently found in pine and fir trees, or in thick bushes and hedges of white and black thorn, is well built of fine roots, grass stalks, and moss, lined with wool and hair. The old birds feed their young from the crop, and when the whole brood is taken, will continue to do so even in the cage. Those which are intended to learn the song of some other bird, should be taken out of the nest as soon as their tail feathers have begun to grow: that is, before they have received any instruction in the notes of the parents. From the very first, the males may be distinguished by the white collar round the neck, and the predominance of the same colour in the wings and tail.

Diseases.—The diseases to which the Linnet is most liable are constipation, atrophy, and epilepsy. It lives in confinement from twelve to sixteen years.

Mode of Taking.—As the Linnet is a peculiarly shy bird, it is difficult to catch in the barn-floor trap, even with the aid of a decoy. In spring, before they have paired, a good decoy in a cage sometimes succeeds in attracting them to the decoy bush; and in autumn, they may occasionally be taken with limed twigs and nooses, set among the lettuces, of which vegetable they are very fond. The shepherds also arrange the salt-

troughs for the sheep, in such a manner as to entrap the Linnets, which come to pick up the scattered grains. Their cry is *Gecker*.

Attractive Qualities.—The song of the Linnet is loud and flute-like, and exceedingly agreeable. It consists of several connected passages, and is esteemed in proportion to the frequency with which certain clear, sonorous notes, called the Linnet's crow, recur. It sings throughout the year, with the exception of the moulting season. When taken from the nest, it should be fed on a mixture of soaked bread crumbs, rape-seed, and hard-boiled egg; on which diet it may be taught not only the song of other birds, *e.g.* the Nightingale, Chaffinch, Lark, &c., but also to repeat various airs and melodies, if constantly whistled in its hearing. It has even been known to learn to talk, though not very distinctly. In whistling airs, it excels all other birds, on account of the peculiar flute-like tones of its voice. The trouble of teaching the Nightingale's song to a young Linnet is also well repaid. One in my possession has acquired it very perfectly, and delights us with it during the greater part of the year, when the Nightingales are silent.

The Linnet may also be taught to fly in and out of the window; though, in all attempts to train it, peculiar care is necessary on account of its shyness. The proper period for this experiment is either in winter, or while the birds are still very young. The best method is to confine them for a considerable time in a large cage, which should be hung at a window looking into a garden, and to feed them with crushed hemp seed. The effect of this food, of which they are very fond, is to take away from them the love of liberty, especially at a time when the means of subsistence are scarce.

The hybrid between the Linnet and the Canary is well known. It is hardly to be distinguished from the Grey Canary, and has not only a very excellent voice, but is quick in learning to whistle.

ADDITIONAL.—The variations of plumage which occur in this bird at different seasons and periods of life, have caused it to be known by the various names of the Brown, Grey, and Rose Linnet; it is also called the Whin Linnet, the Greater Redpole, and the Lintie or Lintwhite, the last two being terms applied to it in Scotland, more particularly; in the poetry of Burns, and other

sweet singers of the north, both of these names frequently occur, as thus :—

“ I waldna gie the *Lintie's* sang
 Sae merry on the broomy lea,
 For a' the notes that ever rang
 From a' the harps o' minstrelsie.
 Mair dear to me, where buss or breer
 Amang the pathless heather grows,
 The *Lintie's* wild sweet note to hear,
 As on the ev'nin' breeze it flows.”

MUDIE says of this well-known and favourite songster, which is by some called the Greater Redpole Finch :—“ The Linnet (for, notwithstanding the many names of the bird, that is perhaps its most appropriate, because its most general one) is partially a migrant within the country, though the sexes do not separate in the same decided manner as the Chaffinches. During the inclement season the birds resort to the lower grounds, especially to those near the sea-shore. They appear in considerable flocks ; the young birds appear earliest, then the females, and lastly, the mature males, which may be said to be the order of movement with all autumnal birds, how limited soever may be the distance to which they migrate.

* * * * * * * *

“ Linnets inhabit a little higher, or more inland, more into the open wilds, than Chaffinches ; and they prefer the closest low bushes for their nesting places. Their general distribution, however, renders that species of accommodation not always accessible ; and hence the nests are sometimes found in garden-bushes, in hedges, or in low bushy trees. The nest is composed externally of dry leaves and fibres, mixed with wool or hair, and lined with the same, or with feathers. The eggs are from four to six, of a dingy blueish white, with short lines and numerous specks of flesh-colour. There are usually two broods in the season ; the first hatch taking place in May, and the second in July : but if any casualty occurs, the female will continue breeding till August.

“ Linnets are birds of very gentle dispositions, easily tamed, and capable of very considerable attachment to those who feed and attend them ; if taken young, the males can be taught to sing ; but the females have no song, and the old males do not utter their note. The young, however, may be made to imitate the songs of several other birds : and there have been instances in which they have been brought to articulate a few words.”

It seems probable that the term Linnet is derived from the fondness of this bird for the seeds of the flax plant (*Linum perenne*). “ Except during the breeding season,” says YARRELL,

"these birds are usually seen in flocks, feeding generally upon small seeds, particularly those of the cruciform plants, with other seeds of the flax, thistle, and dandelion." Sir WILLIAM JARDINE observes, that "every one who has lived much in the country must have remarked the Common Linnets congregating towards the close of a fine winter's evening, perched on the summit of some bare tree, pluming themselves in the last rays of the sun, chirruping the commencement of their evening song, and then bursting simultaneously into one general chorus, again resuming their single strains, and again joining, as if happy and rejoicing at the termination of their day's employment."

GILBERT WHITE also alludes to this habit of congregating and singing or twittering in chorus:—"We have in the winter vast flocks of the Common Linnets, more, I think, than can be bred in any one district. These I observe, when the spring advances, assemble on some tree in the sunshine, and join all in a gentle sort of chirping, as if they were about to break up their winter quarters, and betake themselves to their proper summer home:" which home, BOLTON says, are dry, barren, and heathy grounds, where there is plenty of heath, furze, and other low bushes. This author describes the nest as "formed on the outside of dry stubble, mixed with hay. The middle coat is formed of finer hay, mixed with hair, very firmly and neatly platted together. The inner coat, or lining, consists of hair, wool, and the down of the seeds of willows, over which is a layer of fine fibres of roots. The whole is a neat piece of work, round, well-finished, and very handsome." He thus estimates the musical powers of this songster:—"The Linnet gives place to few birds in point of song. His tone is mellow, and his notes sprightly, artfully varying into the plaintive strain, and returning again to the sprightly, with the greatest address and most masterly execution." He also says that its disposition is gentle and docile, and quotes the following anecdote, originally related by the late Dr. LETTSOM, to show that it is capable of strong attachment for its own species:—"Two Linnets, both male birds, which had *not* been brought up together, formed a remarkable attachment to each other. When one sang, the other joined, and at night each always slept on that side of his cage which was nearest to his friend. Their attachment was more fully ascertained, when they were set at liberty while their cages were being cleaned. They then flew to each other's cage, and at length were occasionally indulged by being put together in the same cage, when they always expressed their high gratification by fluttering towards each other, joining their bills together, and each gently picking the tongue of his friend by turns. After some time, one was suffered to fly abroad in

the open air, whilst the cage of the other was hung on the outside of the window, as a pledge for the return of his friend. When at liberty, they appeared greatly delighted with the company of the wild Linnets, with whom they would range for several hours together; but the temptations even of love and liberty could not induce this little Damon and Pythias to forsake each other. As soon as the hour of rest approached, the sportive wanderer always returned to the empty cage, which was placed by the side of that of his friend."

108. THE LESSER REDPOLE.

Fringilla Linaria, LIN. *Sizerin*, BUR. *Der Flachsfinke*, BECH.

Description.—The Lesser Redpole resembles the Linnet in the colour of its plumage, but in shape, size, and habit of life, is more like the Siskin. It is five inches and a quarter in length, of which the tail measures two inches and a quarter. The beak is only four lines long, very pointed, and yellow; the feet are eight lines in height, and black. The top of the head is bright crimson; the upper part of the body dark brown, spotted with white and dingy yellow; the rump rose-colour; the throat is black; the feathers of the lower part of the neck and breast a light rose-colour, edged with white; the rest of the lower part of the body white. The wing coverts are dark brown, the two larger rows being tipped with white, which produces a double transverse stripe on the wings; the lesser wing coverts are tinged with dusky yellow; the pen feathers and tail are black.

The plumage of the female is in general lighter in colour; except in very old birds, there is no trace of red upon either the breast or the rump, and the whole upper part of the body, as well as the breast, is spotted with white and dark brown. The last-mentioned peculiarity distinguishes them from the young birds, and males of one year old, on whose breast also there is no red, but which have on the back the rusty yellow colour of the full grown males.

In confinement the male generally loses its red breast in the first moulting, and in the second the red on the top of the head, which becomes greenish yellow. I possess a male, in which the top of the head assumed this colour, which it has preserved for six years, at the third moulting.

Habitat.—The Lesser Redpole is at home throughout Europe,

though, strictly speaking, a native of Sweden, Lapland, Greenland, &c. It is a bird of passage, arriving in Germany in large flights during the second half of October, and departing again in March and April. During this period it frequents those places where there is a plentiful supply of elder-berries.

In confinement, it matters nothing whether this bird be kept in a cage or allowed to range the room. It is unfortunate that, under these circumstances, the brilliancy of its plumage is of so short duration.

Food.—Elder-berries are its favourite food when in a wild state, though it also eats linseed, rape-seed, &c., moistening all its food in its crop, before subjecting it to the process of digestion.

If kept in a cage, it may be fed on poppy and hemp-seed, the former of which is the most wholesome. If allowed to range the room, it is content with the first universal paste.

Breeding.—It is a very rare occurrence if a pair build a nest in Germany.

Diseases.—The Lesser Redpole is subject to the same diseases as the Siskin; though it seems to be peculiarly liable to ulcerated feet, in which the claws frequently drop off. It may be kept alive for eight years or more.

Mode of Taking.—Considerable numbers of these birds are often caught in traps, in the spring and autumn, by means of decoy birds, either of their own species, or Siskins. They are so silly, or so little timorous, as often to become entangled in the limed twigs, at the moment when the fowler is making sure of their comrades which had been already caught. This peculiarity, which seems to arise from their slight acquaintance with human beings, is shared by all birds which breed in the extreme North. Their call is *Peewit! Krek, krek! Höid!*

Attractive Qualities.—The Lesser Redpole is recommended to the amateur rather by the beauty of its plumage, than by its song, which is merely a low, continuous twitter. It may, however, be taught to draw up its own water, and perform other similar feats; as well as to eat out of its master's hand. It is a very affectionate bird; constantly caressing—not only its own mate—but even Linnets, Goldfinches, Siskins, and Canaries, if confined in the same cage. It seems, therefore, not improbable that it might be induced to pair with some, if not all of these.

ADDITIONAL. — This bird is called by MACGILLIVRAY the Smaller Redpole Linnet, and described by him as “the most diminutive of our native Passerine birds, and withal so delicate, lively, and affectionate a creature, as to be a special favourite with most people who know it; resembling the Siskin in its habits as well as in shape, and being one of the species which forms the transition from *Linaria* to *Carduelis*. Its flight is peculiarly bounding and buoyant, and its voice remarkably clear and loud. When starting, it emits a hurried chatter of short notes, and as it proceeds on its flight utters a single note at intervals, less prolonged than those of our other Linnets. Its cry is so different from that of the Brown Linnet and Twite, being clearer and sharper, that one who has attended to it can readily distinguish the species on the wing. Although not abundant in any part of the country, it forms large flocks in winter, and betakes itself to the birch and alder woods, in procuring the seeds of which the birds hang in all kinds of attitudes, like many other small species that find their subsistence on trees, such as Titmice and Gold-crests. I have also seen them in August scattered over a tract overgrown with thistles, the seeds of which they picked out precisely in the same manner as the Goldfinch. On such occasions, unless they have previously been shot at or pursued, they take little heed of approaching danger, so that one may easily approach them, or even go so near as to snare them with a noose on a long stick or fishing-rod. In many parts of Scotland, and in the north of England, the Redpole remains all the year, breeding in the hilly districts, among the brushwood that skirts the flanks of the mountains, or covers the margins of streams in rocky dells. Not having met with its nest, however, I take the liberty of borrowing Mr. SELBY's account of it. ‘It is built in a bush or low tree, (such as willow, alder, or hazel), of moss and the stalks of dry grass, intermixed with down from the catkin of the willow, which also forms the lining, and renders it a particularly soft and warm receptacle for the eggs and young. From this substance being a constant material of the nest, it follows that the young are produced late in the season, and are seldom able to fly before the end of June, or the beginning of July. The eggs are four or five in number; their colour, pale blueish green, spotted with orange brown, principally towards the larger end.’”

THE MOUNTAIN LINNET AND THE MEALY LINNET.

Two other species of Linnets are included by most naturalists in the British Fauna, viz. those above mentioned; the first of which (the *Fringella Flaviostres* of LINNÆUS) is frequently called

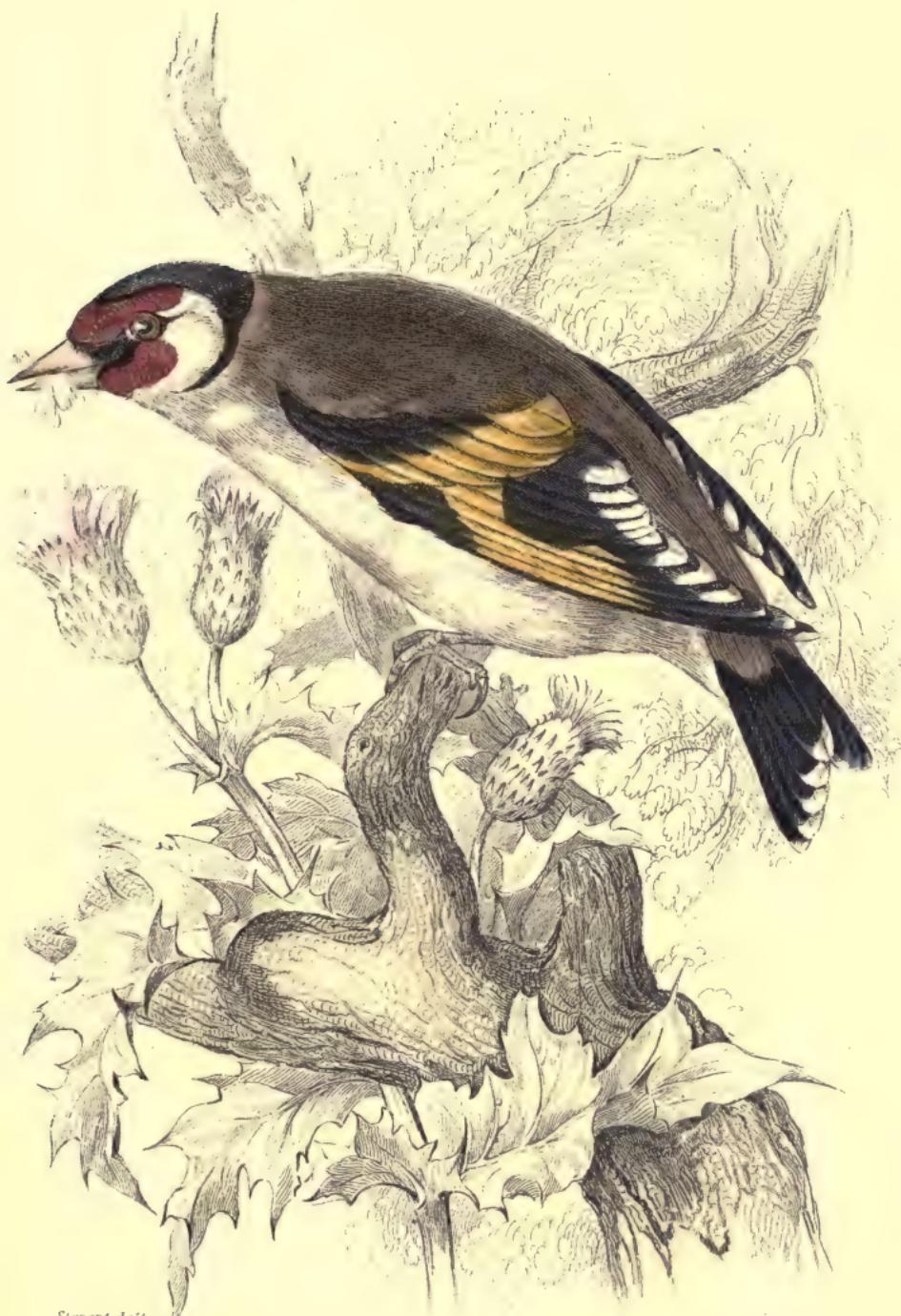
the Twite, and by the Scotch, the Heather Lintie ; the second (the *Fringilla Boreales* of TEMMINCK) is sometimes known as the Mealy Redpole. BECHSTEIN, it may be seen, considers the former of these birds identical with the more common species ; but the testimony of our own naturalists is too strong to allow of our easily admitting this. "The Mountain Linnet," says YARBELL, "is distinguished from the Common Linnet, and from both the Redpole Linnets, by the greater length of its tail, which gives this bird a more elongated and slender appearance ;" and in the admirable illustrations to his valuable work on British Birds, we see at once, by comparing the two species, how marked is the difference. MACGILLIVRAY also might be quoted in confirmation of this opinion, as well as JARDINE, SELBY, and others. This bird appears to be not uncommon in Scotland ; especially is this the case in the western isles. In the south of England it is a winter visitant only, and the bird-catchers there say that they can tell immediately if there are any Mountain Linnets among the flocks of small birds, by their particular note, which resembles the word "twite," hence one of their popular names. Equally good authority might be quoted to show that the Mealy Linnet is not, as some ornithologists affirm, a variety only of the Lesser Redpole.

III. THE GOLDFINCH.

Fringilla Carduelis, LIN. *Chardonneret*, BUF. *Der Steiglitz oder Distelfink*, BECH.

Description.—This bird—attractive from the beauty of its plumage and song, its great docility, and the readiness with which it breeds with other birds—is five inches and three quarters in length, of which the tail measures two inches. The beak is five lines in length, very sharp, and slightly bent at the point, and compressed at the sides. In colour it is whitish, with a tinge of brown at the tip. The feet are brown, slender, and six lines in height. The front of the head is bright scarlet, and a broad stripe of the same colour encircles the root of the beak. The poll of the head is black, and a similar stripe passes over the back of the head, down each side of the neck. Behind this stripe is a white spot on both sides ; and the cheeks and upper part of the neck are also white. The back and nape of the neck are a beautiful brown ; the rump whitish, with a tinge of brown ; and the larger feathers black. The sides of the breast and groin are light brown ; the middle of the breast, the belly, and the vent, are whitish, tinged with

PLATE 26.



Stewart delc

GOLDFINCH

Licars se

brown. The thighs are greyish; the pen feathers velvety black, with white tips, which become smaller in old birds, and are sometimes wanting in the two first feathers. The middle pen feathers are edged on the outer plume—for about an inch—with bright yellow; which, in conjunction with the yellow tips of the hindmost large coverts, produces a beautiful bright spot on the wings. The other coverts are black; the tail is slightly forked, and black; the two, or, sometimes, the three first pen feathers, having a white spot on the middle of the inner plume, and the rest being tipped with white. Occasionally, also, the third feather is quite black at the sides.

The female is somewhat smaller; the red stripe round the beak is neither so bright nor so broad; the cheeks are marked with light brown; the small wing coverts are brown; the back dark brown. The assertion often made by bird-sellers, that the presence or absence of the white speck at the tips of the pen feathers forms a criterion by which the sexes may be distinguished, is not founded on fact. As ill founded are the varieties which they pretend to distinguish by the same characteristics, which, after all, depend only on the age and condition of the bird. They contend, also, that a difference of size indicates a corresponding difference of species. In Thuringia, the large Goldfinches, which resemble the Linnet, are called Fir Goldfinches, and are said to have been bred in the pine-forests; and the smaller Garden Goldfinches, also from the place in which they are supposed to have been reared. A closer observation, however, proves that this distinction has as little foundation as the last. The birds which first chip the shell, are always larger than those last hatched, because they appropriate to themselves an unfair share of food provided by the parents.

The well-ascertained varieties of the Goldfinch are the following:—1. The Yellow-breasted Goldfinch:—2. The White-headed Goldfinch:—3. The Black-headed Goldfinch, of which four specimens were once taken out of a single nest:—4. The White Goldfinch:—5. The Black Goldfinch. They are either altogether black, which in confinement is the result of age, or the immoderate use of hemp seed, or they still retain the yellow spot upon the wing. *HERR SCHELBACH*, the superintendent of the menagerie at Cassel, tried the experiment of rearing a brood of Goldfinches in a cage, from which the light

was, as far as possible, excluded. They became altogether black, except the yellow spot on the wings, but assumed their natural plumage at the first moulting. Birds in which the black hue of the plumage is the effect of age, retain it after moulting, which, however, they do not long survive. A sixth variety is the Bastard Goldfinch, of which more hereafter.

Habitat.—The Goldfinch is found all over Europe; and throughout the summer frequents gardens, groves, and such mountainous districts as are not altogether uncultivated, or are planted with coniferous trees. It is not a bird of passage, but in autumn collects in flights of at most from fifteen to twenty, and makes excursions in search of thistle-down; forsaking districts where the snow is thick upon the ground, for others where the weather is more genial.

This bird may either be kept in the cage, or allowed to run about the room. In the former case, an ordinary small-sized Chaffinch-cage is preferable to a bell-shaped one; as the Goldfinch is not fond of hopping about the higher perches, and is, indeed, apt to become dizzy. In the latter, a place separated from the rest of the room by a grating, or a small tree should be provided for its sleeping-place. It will be noticed that it particularly likes to sleep and sing on the topmost branches.

Food.—The natural food of the Goldfinch consists of various species of small seeds; for example, plantain, succory, burdock, lettuce, cabbage, rape, canary, and thistle seeds.

In confinement, it should be fed on hemp and poppy seed, especially the latter. If allowed to range the room, it is content with the second universal paste: and I have one in my possession, which, though refusing to touch an insect, freely eats whatever comes to table, whether meat or vegetables. A little green food should be occasionally given to them; as, for instance, lettuce or cabbage-leaves, groundsel, watercress, &c.

They are great eaters, and in the aviary usually take up a position near the food trough, and drive away, with a harsh cry, all birds which attempt to come near them. At the same time, they will feed birds of similar species to themselves—as Canaries, Siskins, and especially Redpoles, whether male or female.

Breeding.—The Goldfinch prefers to build its nest, which, with that of the Chaffinch, is among the most remarkable for

the strength and beauty of its structure, in apple and pear trees. It is semi-spherical, and composed of moss, lichens, and fine root fibres, finely woven together, and lined with wool, hair, and thistle-down. The female lays once a year five or six pale sea-green eggs, spotted with light red, and often surrounded at the thick end with a circle of small blackish stripes. The young, which before the first moulting are grey on the head, and are hence called Greyheads by the birdsellers, are fed from the crop. The males may at a very early period be distinguished by a narrow white ring round the beak. When taken from the nest, they may be reared on poppy seed, and bread soaked in milk or water. The song which they imitate with the greatest ease and perfection is that of the Canary, with which bird they pair, and produce bastards, which in their turn are prolific. Of the two birds, the Goldfinch should always be the male, as, especially when young, it is exceedingly ardent, and will often pair with two Canaries, and rear a double brood. The bastards are in general not very handsome birds, though they have been occasionally produced with a yellow body and the head of the Goldfinch, but are distinguished by the excellence of their song. When, as is often the case, Canaries form negligent parents, and do not persevere in sitting, it is a good plan to put the eggs, if possible, in a Goldfinch's nest. They will be hatched and treated like the other nestlings, and when old enough to feed themselves, may be transferred to a cage.

Diseases.—The disorder to which Goldfinches are most liable is epilepsy. Sore and swollen eyes, to which they are also subject, may be cured by an application of unsalted butter. Stupor and giddiness are occasionally produced by the immoderate use of hemp seed, and may be cured by the substitution of soaked lettuce and thistle-down. In general, it will conduce to their health, if they be allowed, now and then, to pull the seeds from a thistle head. When very old, they become blind, and lose the beautiful red and yellow hue of their head and wings. Though not, generally speaking, a healthy bird, instances have been known of their living from sixteen to twenty-four years.

Mode of Taking.—In spring the Goldfinch may be lured by a decoy-bird to the decoy bush, or the Chaffinch-trap, especially if baited with thistle-top: though, from the cautious

disposition of the bird, neither plan can be recommended as likely to be very successful. In winter they may be occasionally caught by attaching springes to a bundle of thistles; and in autumn and spring, the springes may be advantageously replaced by limed twigs.

The call of the Goldfinch is *Tizfit!* or *Stichlit!*—from the latter of which is derived the name by which it is known in Bohemia.

Attractive Qualities.—The Goldfinch is a lively, handsome bird, continually in motion, and uttering its pleasant and sonorous song at all periods of the year, except when moulting. It consists, besides several intricate and twittering notes, of certain tones, which resemble those of a harp, and it is valued in proportion to the number of times in which the syllable *Fink!* recurs. The Goldfinch may also be taught to whistle certain airs, and to repeat the song of other birds, but in this respect is not so docile as the Linnet and Canary.

Its tameness is, however, very remarkable, as it even learns to discharge a small cannon, and to feign death; as well as to draw up its food and water, by means of an apparatus provided for the purpose. This apparatus consists of a band of soft leather, two lines in breadth, in which are pierced four holes, through which the feet and wings of the bird are put, and the ends united to a ring on the belly. To this ring is attached a small chain, fastened at the other end to the seed and water vessel. When the bird is hungry, it pulls the chain up a little way with its beak, puts its foot on it to retain the length already gained, then pulls again, and so continues till its purpose is accomplished. Sometimes the two vessels are attached to a pulley in such a manner, that when one descends the other rises, so that the bird can only enjoy his food and drink by turns. I have also seen Goldfinch-cages so contrived, that the bird, in taking a seed from the box, was compelled at the same time to ring a bell. As in the case of several Goldfinches in our room, the bells were harmonized, the general effect was not disagreeable.

The Goldfinch may be taught to come and go at command, without fear of losing it, more easily than the Linnet. To effect this, a Goldfinch to which the warmth of the room has not become absolutely necessary, is to be placed in his cage on the window-sill, or on a shelf purposely constructed. Near it

hemp seed should be strewn, or a bundle of thistle-tops fastened, which, together with the call of the prisoner, will soon attract other Goldfinches. When they have been accustomed to the place, the caged bird may be hung inside the window, as a precaution against the cold, and merely a cage left on the outside—not, however, with a view to frighten the visitors, but only to terrify the Sparrows. The door of this cage should be so arranged as to shut, by means of a thread communicating through the window into the room—a contrivance which need be used at first only to frighten the Sparrows, if they should get into it. The Goldfinches, on the contrary, should be allowed to pass in and out at pleasure till the snow begins to melt, or it is probable that they might betake themselves elsewhere. They may then be caught, and kept in the cage till they are so tame as to fly about the room, and return to their cage at night, or at the word of command. The cage, indeed, ought to be so contrived as to close after the bird without noise, when he either comes in or goes out, and such a door as the bird may be taught to open for himself. A bird thus treated may be restored to liberty, without fear, in the moulting time in August; and, although he may fly away, will certainly return in December when the snow begins to fall, and sing far better than one which has been confined during the same period. From the time, however, when he is set free, it is a wise precaution to hang outside the window an open cage, in which a little food is occasionally scattered, that he may never return and be disappointed in his hope of finding nourishment. The use of a decoy-bird also would do something to ensure his return; and, when once in the cage, the door should be contrived so as to shut and confine him in the manner before described. After this experiment has once succeeded, it will not be necessary to repeat the training of the bird by a partial liberty in the room. The only risk attendant upon the practice is, that the bird may be laid hold of by the fowler during his season of liberty. The same method of taming is often successful in the case of Tits, Chaffinches, and other birds.

ADDITIONAL.—Of all the sweet songsters that delight the ear with their music, and the eye with their lively motions, and graceful forms, and delicately blended tints, there is none more generally known, nor more universally admired, than this beautiful Finch, termed *Carduelis*, or the Thistle Finch, on account

of its fondness for the downy seeds of a class of plants, which would be much more troublesome to the agriculturist, were it not for the assistance rendered by this bright-winged Goldspink, or Goldie, as the Scotch call him. This is a bird very generally distributed throughout these islands, where it permanently resides, affecting most the wooded and cultivated districts, although, for reasons which it seems difficult to explain, while it is plentiful in some of these districts, in others, which appear to possess the same advantages, it is extremely rare. MACGILLIVRAY gives us the following agreeable picture of the Thistle Finch enjoying its favourite food and pasture :—“ Let us stroll abroad on this fine autumnal day, when the sun shines brightly on the yellow fields, and the thistle-down floats along on the gentle breeze, gliding like snow-flakes over the river. There, on that old pasture, is the source of the plumy eruption, a forest of tall weeds, which the husbandman ought to have pulled up and burnt before they had time to perfect their seeds. See, tufts of down are scattered about by those little birds, that seem bent on demolishing all the heads, *anthodia* or *capitula*, as the botanists term them. How curiously they hang on the prickly stems and leaves—with what adroitness do they thrust their bills into the heart of the involucres—and how little do they regard us as they ply their pleasant pursuit, unconscious of danger, and piping their mellow call-notes !”

“ Long as I have noticed this bird,” says KNAPP, “ it has appeared to me that it never makes any plants generally its food, except those of the *syngenesia* class, and on these it diets nearly the whole year. In the spring season it picks out the seeds from the fir cones. During the winter months, it very frequently visits our gardens, feeding on the seeds of the groundsel (*Senecio vulgaris*), which chiefly abounds in cultivated places, and vegetates there throughout the coldest seasons. This, however, is a humble plant; and when covered by the snow, the poor birds are half famished for want. We then see them striving to satisfy their hunger by picking some solitary green head of the plant remaining above the frozen snow; and so tame, that they will suffer a very near approach before they take their flight. As the frost continues, our little garden visitors diminish daily, and by spring only a few pairs remain of all the flocks of autumn. Yet it is very remarkable, notwithstanding this natural predilection, how readily this bird conforms to a perfect change in its diet, and in all the habits of its life. Most of our little songsters, when captured as old birds, become in confinement sullen and dispirited; want of exercise, and of particular kinds of food, and their changes, alter the quality of the fluids: they become fat-

tened, and indisposed to action by repletion ; fits and ailments ensue, and they mope and die. But I have known our Goldfinch, immediately after its capture, commence feeding on its canary or hemp-seed—food it could never have tasted before ; nibble his sugar in the wires like an enjoyment it had been accustomed to, frisk round its cage, and dress its plumage, without manifesting the least apparent regret for the loss of companions or of liberty. Harmless to the labours or the prospects of us lords of the creation as so many of our small birds are, we have none less chargeable with the commission of injury than the Goldfinch ; yet its blameless, innocent life does not exempt it from harm. Its beauty, its melody, and its early reconciliation to confinement, rendering it a desirable companion, it is captured to cheer us with its manners and its voice, in airs and regions very different from its native thistly downs, and apple-blossom bowers."

BRODERIP well observes, that "the *débonnaire* Goldfinch builds one of the most elegant nests that our English Finches produce : moss, lichens, wool, and grass, artistically intertwined form the outside of the fabric, which is generally hidden in a quiet orchard or secluded garden, where, in the midst of some evergreen—an arbutus, perchance—it is protected from the prying eye by the compact leafy screen of the well-grown healthy shrub ; the delicate down of willows, or dwarf early-seeding plants, the choicest lamb's wool, and the finest hair, form the warm lining, in which the blueish-white eggs, dotted with a few rich brown spots, are deposited."

112. THE SISKIN.

Fringilla Spinus, LIN. *Tarin*, BUF. *Der Zeisig*, BECH.

Description.—This well known Cage-bird is four inches and three quarters in length, of which the tail measures one inch and three quarters. The beak is four lines in length, and contracted towards the point, which is very sharp. The tip is brown ; the rest light grey, except in winter, when it becomes white. The shanks are seven lines in height, and, with the claws, brown. The top of the head and throat are black ; the neck, cheeks, and back, green ; the latter speckled with black. The rump, as well as a stripe between the eyes, the under part of the neck, and the breast, are greenish yellow ; the belly, vent, and groin, whitish yellow ; the two last being covered with black spots. The pen feathers are black, bordered with yellowish green on the outer plume, and after the fourth, have a yellow spot near the root. The lesser wing

coverts are green; the larger edged with yellow, which produces stripes of the same colour. The tail is forked; yellow near the root, and the rest—with the whole of the two centre feathers—black.

The plumage of the female is in general paler; the head and back are greyer, and more spotted with black; the throat and the sides are whitish; the breast and the neck white, marked with green and black; the feet greyish brown.

The male generally loses the black of the throat in the second year; and for the most part, the older he is, the greener, yellower, and therefore handsomer, he becomes. There are also varieties of this bird—black, white, and speckled Siskins. Some years ago I shot one, in which the breast was quite black.

Habitat.—The Siskin is found throughout Europe, and is very common in Germany, where it remains during the winter. It does not, however, confine itself to one place, but flies about in search of food. It may either be confined in a small cage, like that of the Chaffinch, or left to range the room.

Food.—In summer the Siskin feeds on the seeds of the fir and pine; in autumn, of the hop thistle and burdock; and in winter, of the alder, as well as on the buds of trees.

In a cage, it may be fed on poppy seed, with which a little crushed hemp seed may be occasionally mixed. If, however, it be allowed to range the room, it is content with the first universal paste. It is a very greedy bird, and although so small, eats more than a Chaffinch; perching all day—if kept with other birds—on the seed box, and fighting with all that approach it. It is also a great diver, yet, though wanting a constantly fresh supply of water, rarely bathes, but contents itself with spirting it over its feathers with its beak. The operation is frequently followed by a careful combing and arrangement of its plumage.

Breeding.—The old story that the Siskin's nest has never been seen, has long been exploded among us. It prefers building in forests of pine or fir, and places its nest on the highest bough of one of these trees, or sometimes on the branch of the alder. It is fastened to the branch with spider's webs, coral-moss, and threads from the cocoons of various insects: and is cleverly constructed of these materials, woven together with small twigs, and lined with very fine roots. The female

generally lays five or six eggs, of a greyish white, thickly spotted, especially at the large end, with purple brown. There are two broods in a year; and the males increase in beauty till after their fourth moult.

Bastards between the Canary Bird and Siskin are often produced, which resemble both the parents, and are very handsome birds, especially if the offspring of a yellow Canary. The experiment of pairing is more certain of success—though the young are not so beautiful—if a Green Canary, which itself seems to have some affinity with the Siskin, be selected for the purpose.

Diseases.—A very fatal disease, which often attacks the Siskin, is epilepsy. Its term of life, in confinement, is from eight to twelve years.

Mode of Taking.—In autumn and winter, the Siskins, by help of a decoy bird of their own species, may be taken in great numbers in the barn-floor trap. In spring they are easily taken by the decoy bush, and may be generally described as by no means shy. Persons who live near a brook shaded by alders, have caught them by merely putting a Siskin out of the window, and a few limed twigs near the cage; and I have myself secured them in a cage, baited with hemp and poppy seed, and provided with a door like that described under the head Goldfinch. To this they were lured by a Siskin inside the room; and when in the cage, I closed the door by means of the connecting thread. They may also be taken by marking the place where they go to drink at noon, and surrounding it judiciously with limed twigs.

Their call, which they utter frequently and loudly, is *Dillah*.

Attractive Qualities.—The Siskin is an attractive bird, in regard both to its plumage and its song; the latter being generally little more than a continuous chirrup, resembling the noise made by a stocking-loom, a peculiarity which renders it a favourite with stocking-weavers. It imitates the songs of other birds, for example,—of Tits, Larks, and Chaffinches, but does not seem able to learn to whistle a tune. It sings throughout the year, except during the moult season; and by its continual twittering, invites all the birds in the aviary to sing. When taken, it feels the loss of freedom so little, as to eat as soon as put into the cage, and on the second day to manifest no sign

of alarm if any one approaches. It may be taught to draw water, and many tricks of a similar character; and in winter may be trained to come and go, by placing the cage outside the window, and strewing poppy and hemp seed before the open door. It generally comes back, and brings several comrades with it. It is hardly prudent to let it loose in March, September, or October, which are the seasons for wandering; though instances have been known, in which trained birds, which have been let loose, have returned after a very considerable interval of time.

ADDITIONAL.—The Siskin Finch, or Aberdevine, as it is frequently called, is somewhat larger than the Goldfinch, and not so compact in appearance, nor are its plumes so beautifully marked and tinted. With us, according to MUDIE, "it cannot be considered a very rare bird, because it is met with in many parts of Britain, though seldom, if ever, in the extreme north; and when it does appear, it is not in solitary straggling individuals, but in flocks, or at least in packs; but as little can it be considered as a regular winter visitant, having an equatorial migration, and in consequence of that, appearing and disappearing at nearly the same times every year. Its migration is rather a migration in longitude, and an involuntary one, produced by the winds, which waft the birds to different parts of the country at different times of the year, according to their direction, their intensity, their continuance, and probably whether they be or not accompanied by falls of snow on the continent. In no instance have they been observed so early in the season as our regular autumnal birds, which are known to breed within the arctic circle in the western part of the continent. They are said to make their appearance in flocks in the lower parts of Germany, about the same time of the year at which our grain-eating birds leave the wilds, and flock on the cultivated fields; but with us they appear considerably later, and sometimes not till the summer birds have begun to arrive. Analogy would lead us to the conclusion that they breed with us, but that, like the Hawfinches, they hide themselves in the depths of the southern forests at that time; but with us, their history, in a state of nature, is very imperfect. They are chiefly known as Cage-birds, and as such they are esteemed for their beauty, their docility, their healthiness, their song, and the readiness by which they produce a mixed breed either way, with the Canary Finches. Their song is not unpleasant; it bears some resemblance to that of the Canary, but it is less powerful."

BOLTON says, that "in the southern countries it is generally

called the Barley-bird, being seen about that seed time ; and in the neighbourhood of London, it is known by the name of the Aberdevine. It often mixes with the smaller Linnets, and is seen picking the seeds of the alder, with its back downwards. It is a singing bird, and being rather scarce, fetches a higher price than the merit of its song deserves, though that is soft, sweet, and various. It will imitate the notes of other birds, even to the chirping of the Sparrow. It is familiar, cheerful, and docile, and begins its song early in the morning. It breeds freely with the Canary, and, like the Goldfinch, may be taught to draw up its little bucket with water and food. The latter consists chiefly of seeds. It drinks frequently, and is fond of throwing water over its feathers."

"I am convinced," observes NEVILLE WOOD, "that ornithologists are mistaken in supposing the Siskin Goldwing to be a rare occasional visitant. Even in Derbyshire I should be almost inclined to consider it indigenous, as future investigations will probably find it in many of the fir forests of Scotland." In confirmation of this opinion, we may quote MACGILLIVRAY, who calls this bird the Black-headed Thistlefinch, and says that "it has been found of late years breeding in various parts of Scotland," and opines that most, if not all, of the individuals seen in the winter months are indigenous.

YARRELL observes, that "the Siskin appear to be much more plentiful in the north than in the south;" and there seems to be no doubt that some, perhaps many, pairs remain and breed annually in or about the fir-woods and plantations of the northern counties of England and Scotland. Although greatly reduced in numbers before these flocks arrive in the southern counties, the Siskin is not uncommon from September to April, and is most frequently seen in small flocks, sometimes by themselves, but more frequently in company with Linnets and Redpoles, twittering almost incessantly as they fly, apparently for the purpose of keeping them together, while they search the alder, birch, and larch for seeds as food; their voice also very much resembles that of the lesser Redpole."

113. THE RING SPARROW.

Fringilla Petronia, LIN. *Soulci*, BUF. *Der Graufink*, BECH.

Description.—If it were not for the beak, this bird might be taken for the female of the Yellowhammer, so great is the resemblance in form and colour. It is five inches and three quarters in length, of which the tail measures two inches. The beak is five lines long, thick at the root; of a

greyish brown on the upper, and white on the under side. The feet are ten lines high, and greyish brown. The head, as far as the nape of the neck, is a reddish ashen grey, spotted with dark brown; while round it, beginning from the eyes, runs a ring of dull white. The back is brown, the feathers having edges of reddish grey, which produces the appearance of grey spots. The rump and sides are greyish brown; the under part of the body reddish grey, mixed with white. The neck yellow in front, edged at the sides with ashen grey. The wings greyish brown. The larger wing coverts have white points. The tail feathers are greyish brown, edged with a lighter shade of the same colour, and having the outermost feathers tipped with white.

The female is more prevailingly grey on the upper part of the body, and has a small pale yellow spot on the front of the neck.

Observations.—This bird may frequently be met with in the German forests. It is a bird of passage only in cold countries. In a state of nature, it feeds, like the House Sparrow, on seeds and insects, and builds in hollow trees. In captivity it may be fed on rape and poppy seeds, as well as on the first universal paste. They are oftener tamed on account of their beauty or rarity, than of their song, which has no recommendation.

114. THE CITRIL FINCH.

Fringilla Citrinella, LIN. *Venturon de Provence*, BUR. *Der Citronen Fink*, BECH.

Description.—This bird is sometimes mistaken for the Serin Finch (*Loxia Serinus*, LIN.); but the peculiarity of the beak is sufficient proof that it is a distinct species. The Serin Finch has a short and thick beak; while in the Citril Finch it is long, sharp, and somewhat compressed, like those of the Goldfinch and Siskin. The species at present before us bears a strong affinity in form, colour, voice, and food to the Canary; except that it is somewhat smaller, and its voice is less sonorous. The resemblance is indeed so close, that I should take the Citril Finch for the original wild stock of the Canary, were not such to be found in the Canary Islands at this day.

It is twenty-five inches in length, of which the tail measures two inches, and is eight inches from tip to tip of the expanded wings. The beak is brownish; the feet a pale flesh colour

Its plumage, which is greenish yellow, tinged in parts with ashen grey and blackish brown, resembles in general that of the Green Finch. The forehead, back, and rump are yellowish green; the back of the head, and the sides of the neck, as far as the throat, grey; the throat, breast, belly and vent greenish yellow. The smaller wing coverts are yellowish green; the larger, brownish black, with a wide border of yellowish green. The pen feathers are brownish black; the foremost edged with whitish yellow, the hindmost with yellowish green. The tail is somewhat forked, and all the feathers are blackish brown, edged on the narrow plume with greenish yellow, and on the broad with white.

The colours of the female are less clear and beautiful: the yellow on the head and lower part of the body is duskier, and the grey on the back of the head and neck extends round the throat like a collar, and is spotted with greenish yellow.

Observations.—This rare and beautiful Cage-bird is a native of the South of Europe, though sometimes found in those parts of Germany which border on France. It is chiefly kept on account of its song, which resembles that of the Canary, and needs the same treatment as that bird. In its native country, which seems to be the Southern Alps, it builds its nest on thick, shrubby firs, and subsists principally on the seeds of coniferous trees.

115. THE LAPLAND FINCH.

Fringilla Laponica, LIN. *Grand Montain*, BUF. *Der Lerchen Fink*, BECH.

Description.—The name of the Lark Finch, by which this bird is known in Germany, is exceedingly appropriate, as it so closely resembles the Lark, not only in colour and general appearance, but in having a large spur on its heel, as to be frequently mistaken for it. In one respect, the unfortunate bird suffers for the resemblance, being often killed by the bird-catchers, when taken in their Lark nets. It is about the size of the Yellowhammer, being six and a half inches in length, of which the tail measures nearly two inches. The beak is yellow, tipped with black; the feet, dark brown. The head is blackish, with specks of whitish orange; or in some cases quite black. A white stripe passes on each side, from the root of the beak, over the eye, and down the neck,

inclining at last towards the breast. The upper part of the body is orange, spotted with brown; the throat and breast light orange, in some cases with a black spot in the centre. The belly, vent, and shanks, are white; the smaller wing coverts light orange; the centre black, with a yellow border, and white tips, which produces a white stripe across the wings. The pen feathers are black, bordered with yellow; the tail somewhat forked, and similar in colour.

The plumage of the female is lighter. The breast is spotted with grey and black; while, in other respects, she bears a close resemblance to the Skylark.

Observations.—This bird is a native of the northern regions, both of the Old and New World, and migrates in winter towards the south. It may generally be seen on its southward journey in company with the Skylark, while it returns home with the Snow Bunting. If taken, it is generally in the autumn, with the Skylarks. Its call is a loud “*Pfiff!*” and its cry resembles that of the Linnet. The note of the female, which also sings, resembles that of the Bullfinch, though hardly so sonorous. Its habits, if allowed to range the room, resemble those of the Lark; but if confined in a cage it sits quietly upon the perches, like a Chaffinch. It may be fed either on the first universal paste, or on hemp, poppy and rape seeds, which form a diet, on which it will live for many years. It is also fond of meal worms; and in summer, like our common Chaffinch, probably subsists, in part, on insects.

116. THE SNOW FINCH.

Fringilla Nivalis, LIN. *Pinson de neige ou Niverrole*, BUF. *Der Schneefink*, BECH.

Description.—The name of this bird may be ascribed either to the white colour of its plumage, to the fact that it is found upon the loftiest mountains, or to its strong resemblance to the Snow Bunting. It is about the size of a Skylark, being seven inches and a quarter in length, of which the tail measures two inches and a quarter. The beak is nine lines in length; thick at the root, running rather suddenly to pink, and shining black. The shanks are ten lines in height; the feet dark brown. The top of the head, cheeks, temples, nape and sides of the neck, are dark grey; the wings are spotted with grey and white; the back greyish brown, varying in shade. The

rump is mottled with black and white; the throat spotted with the same colours; the upper part of the breast whitish grey; the rest of the lower part of the body white. The foremost pen feathers are black; the rest, as well as the wing coverts, white; the tail feathers are white, tipped with black, with the exception of the two external ones, which are entirely white, and the two in the centre, which are altogether black.

The female is hardly distinguishable from the male. The head is grey, tinged with red; and all the lower part of the body is snow white, except the breast, which has a dingy appearance, and the sides, which are spotted with black.

Observations.—This bird is a native of the mountainous districts in the South of Europe, but reaches Central Germany in its migrations. I have seen it in Thuringia, among small flocks of the Mountain Finch, with which it may frequently be caught on the decoy-bush. It is a lively bird in the cage, and may be fed on millet, rape and hemp seed, though appearing to prefer to any other food the seeds of the fir tree, and of wild hemp (*Gallopsis Cannabina*, LIN.). It is not improbable, also, that in a state of nature, it partly subsists on insects. The call is “*Kip, kip!*” and it sings constantly, though scarcely more pleasantly than the Mountain Finch, to which bird it bears, in many respects, a strong resemblance. When kept by the amateur, it is, therefore, chiefly on account of its rarity.

117. THE CANARY.

Fringilla Canaria, LIN. *Serin de Canarie*, BUF. *Der Canarien Vogel*, BECH.

Description.—The original home of this bird,—now so well known in every country in Europe, even as far north as Russia and Siberia, and everywhere prized for the beauty of its plumage, its engaging disposition, its admirable song, and its extraordinary docility,—is the Canary Islands, where it breeds on the banks of rivulets. It is said to have been introduced into Europe in the beginning of the sixteenth century, by a ship bound for Leghorn, which foundered near the island of Elba. The birds set at liberty by this accident found the climate so propitious as to breed, and would probably have become at last quite acclimatized, had they not been so diligently sought after by the bird-catchers, that not a single individual is now to be found in the island. It was therefore from Italy that Canaries were introduced into the rest

of Europe. Their preservation in captivity was rendered at first more difficult, by the fact that very few females were imported. The original colour of the bird was grey, inclining to green on the under part of the body, and, on the whole, not unlike that of the Linnet. But this has undergone so complete a change from domestication, difference of climate, and hybridizing with birds allied in species, that we now have Canaries of almost every colour. The prevailing hues, however, are grey, yellow, white, blackish, and reddish brown ; the mixture of which again gives rise to innumerable varieties. In Italy the Canary has bred chiefly with the Citril Finch and the Serin ; in Northern Europe with the Linnet, Green Finch, and Siskin. Were it not indeed a well-established fact that the Canary is a native of the islands of the same name, we might reasonably suppose that it descended from some one or more of the species above-mentioned. I have seen a mule between a Siskin and a Serin, which exactly resembled a Green Canary, and also the offspring of a female Grey Canary, in which no trace of their real parentage was discernible.

Those Canaries which are blackish grey, or greyish brown on the upper part of the body, like a Linnet, and at the lower part greenish yellow, like a Green Finch, are the commonest and healthiest birds, and have deviated less from the colour of the original stock. Their eyes are dark brown. Yellow and white Canaries have often red eyes, and are not so strong. The reddish-brown Canaries, with greyish brown eyes, are the rarest, and in respect to strength and longevity, occupy an intermediate position between the other two varieties. As, however, the plumage of the Canary generally displays more than one of these colours, the bird is valuable in proportion to the regularity with which it is marked. Those, however, in which the body is yellow or white, and the wings, tail, and head—particularly if crested—yellowish dun, are at present considered the handsomest birds. Next to these are the Golden Yellow Canaries, with black, blue, or blackish grey head, wings, and tail ; then, the blackish bird, with grey or yellow head and collar ; next, the Yellow Canaries, with black or greenish yellow head, which in this case should have a crest. The grey, or almost black Canaries, with the yellow breast, and white head and tail, are held in peculiar estimation. Such birds as are irregularly mottled or spotted, as well as those

which are uniform in colour, are considered of but little value. I may notice here, that it is a mistake to suppose that these varieties of colour are produced in Canaries and other birds by variety of food; as, in point of fact, the food of wild birds, in which these varieties are not observed, is far less uniform. They may more probably be ascribed to an unnatural habit of life, want of exercise, and the use of artificial diet. My own birds, which are fed on the simplest nutriment, display those varieties of colour as much as any others.

The female is hardly distinguishable from the male, except that the plumage of the latter is generally brighter in colour. His head also is rather larger and longer; the body more slender; the neck not so short; and the legs longer and straighter. Another special characteristic is, that the yellow of the temples, and round the eyes, is always brighter than in any other part of the body.

The Canary is about the size of a Linnet; being five inches in length, of which the tail measures two and a quarter. The beak is five lines in length, strong, pointed, and whitish; the feet are flesh-coloured, and eight lines high.

The principal mule Canaries are the following:—1. The mule between the Canary and the Goldfinch. The colours of this very handsome bird resemble, in some degree, those of each parent. The most beautiful which I have ever seen was ashen grey on the crest, and silvery white on the rest of the head, and the upper part of the neck. A broad orange stripe surrounded the root of the beak, and a snow-white collar encircled the neck. The back was greyish brown, streaked with black; the under part of the body, including the rump, white. The vent, the wings, and the first pen-feathers are white; the rest, as well as the coverts, black, edged with yellow, and having a golden yellow spot in the middle of the wings. The tail was white, with a black spot at the side; the beak white, with a black tip; and the feet also white. The mother of this bird was white, with a greenish grey crest; and it may generally be remarked, that the most beautiful birds are the offspring of a Goldfinch and a yellow or white Canary.

2. The mule between the Canary and the Siskin very closely resembles the female Siskin, if the offspring of a female green Canary. If she be white or yellow, the mule is lighter in colour, but still like the Siskin in shape.

3. The mule between the Canary and the Greenfinch closely resembles the next variety.

4. The mule between the Canary and the Serin Finch, if not bred from a female Canary, which is either yellow or white, cannot be distinguished from the common grey or green Canary, except by its smaller size, and thick short beak.

5. The mule between the Canary and the Linnet, if bred from a grey Canary, can hardly be distinguished from it, except by the length of its tail ; if from a yellow or white one, is variegated in colour.

The other known mules are less common.

Habitat.—Except in the breeding season, the mules should be kept in small bell-shaped cages, made of wire, which ought to be not less than one foot in height, and eight inches in diameter, and provided with two perches, placed crosswise, one above the other. The females may either be allowed to range the room with clipped wings, or be confined in a cage of such a size, as to admit of constant and varied motion. This exercise has a great effect in preserving health and strength. In the small cages, adapted for one bird, the seed and water vessels should be placed at the extremities of the lower perch. They should be made of glass, and the seed-trough should be provided on the outside with a covering of some sort, to prevent the bird from scattering its food. For the same reason, the seed-drawers for the larger cages are covered with a net of fine wire. As cleanliness is the most effectual preventive of many diseases to which this pretty bird is subject, the bottom of the cage should be so constructed as to draw out ; and ought to be cleared and strewed with river sand not less than once a week. The cage ought never to be left in winter in a room without fire, as these domesticated little foreigners have never been inured to the severity of our climate, though in summer they delight in fresh air. They always sing best in broad sunlight, and when the natural warmth of the day prompts them to take the refreshment of the bath.

Food.—Under this head, the most important, as regards the management of Canaries, it may be laid down as a general rule, that the simplest and most natural diet is the best. The best food for Canaries is the summer rape seed ; that, namely, which is sown late in spring ; and neither so large nor so black as the winter rape seed, which is sown in

autumn. Like Linnets, they thrive on this food alone; but it is occasionally advisable, especially in spring, when they are desired to breed, to mix with it a little crushed hemp, canary, and poppy seed. Better still, perhaps, is a mixture of summer rape seed, oats, or oatmeal, and a little millet or canary seed. This is especially adapted for the females, though in winter they are also content with bread, or barley-meal, soaked in milk, if they receive a fresh supply every day. In summer, both sexes ought to be supplied with green food—cabbage or lettuce leaves, turnip-tops, groundsel, watercress (if well washed); and in winter, with pieces of sweet apple. As for the mixture of rape seed, millet, hemp seed, canary seed, oats, oatmeal, poppy seed, lettuce seed, linseed, plaintain seed, tansy seed, pink seed, sugar, cakes, biscuits, buns, and the like, which some people give to their birds, it is injurious, in every respect. It makes them dainty, weak, disinclined to breed, sickly, and generally kills them at an early age. It is easy enough to accustom these, and other birds, to eat and enjoy whatever comes to table; but, in so doing, we only lay the foundation for future disease, and speedy death. While, on the contrary, poor people, who are not acquainted even with the names of many of these delicacies, succeed in rearing and preserving healthy, handsome, and lively birds.

Canaries should be supplied daily with clean water, for drinking and bathing; and they swallow the larger grains of the sand with which their cage is strewed, as an aid to the process of digestion. These remarks, however, must throughout be understood to apply only to full grown birds, as the young require a very different treatment.

Breeding.—The propagation of these birds is attended with many difficulties, which have been rather increased than diminished by the innumerable expedients invented to obviate them. For pairing, young males, of from two to five years old, are usually selected; and experience shows, that if such breed with females older than themselves, the majority of the brood will consist of males. Old birds may be recognised by the projecting blackish scales on the legs, and by their long strong claws. Good breeding birds are rare and costly. Some males are melancholy and phlegmatic, and are so silent as not to attract the attention of their mates; some are so passionate, as to be always fighting with the females, and even to kill the

nestlings; others, again, so ardent, as to tease the female during the time of incubation, to tear the nest, break the eggs, or induce the mate to forsake her eggs or nestlings. The females, too, have their faults. Some forsake their eggs as soon as laid, and begin to pair again; others, are inattentive in feeding their young, or even bite them, and pull at their feathers, so that they die a miserable death; others lay their eggs at too long intervals, or are so much exhausted by the effort, as to be unable to give them the requisite attention afterwards. For all these faults, various corrections have been proposed, but I have found none of them effectual in every case; and it is best for the amateur to get rid of such birds as I have described, and to supply their places with others.

To procure handsome young ones, the best method is to allow only such birds to pair as are both of the same colour, and themselves clearly marked; though of course, in large aviaries, when the birds pair promiscuously, this precaution cannot be taken. Greenish or brownish, paired with light yellow birds, often produce very handsome offspring. One rule, however, may be laid down as invariable; not to allow two crested birds to pair, as the young ones are almost always bald, or in someway disfigured on the head.

Canaries begin to pair about the middle of April, and may be allowed to do so either in a cage or a room. In the former case, a male and a female, or a male and two females, are to be confined in a large wire cage. In the latter, the room must be partly filled with pine boughs (*pina spicea*, LIN.) which have been cut in February, and do not therefore shed their leaves. In both cases the birds must be able to enjoy the warmth of the sun, and must be furnished with hemispherical nests of turned wood, or osiers woven together, two for each pair. If for a window-sash a wire grating could be conveniently substituted, so that the birds could have fresh air, as well as light and warmth, it would tend materially to increase the strength and health of the young ones. The pair which are designed to breed together, should be put for a week into a small cage, before being removed to the breeding-cage. If a male is to be mated with two females, the females ought to be previously kept in a small cage, till they have learned to agree. In this case, the breeding-cage should be divided into two parts, by a partition, in which is a communication, closed by a

sliding door. The male is first put, with one of the females, into one of the compartments, with the door of communication shut. When she has laid, he is to be taken away and put into the other compartment with the second female. When she also has laid her eggs, the door may be left permanently open, and the male allowed to pass from one to the other. He will, in this case, visit his two mates alternately, and they on their part will manifest no jealousy of each other. In a room full of Canaries, the proportion of males to females should be one to two, or even three. Each male will first select a favourite, with which he will pair, and always continue on the most affectionate terms ; but during the process of incubation, he will be invited to pair by the other females, and will probably do so, without afterwards troubling himself much with either them or their eggs. It is noticed, that from unions such as these, the largest broods, and best birds, are produced.

If the floor of the room be strewed with fine moss and lichen, the birds will need no further help in building their nests ; though some persons supply them with hair of various animals, swine's bristles, fine dry hay, shreds of paper, and woollen or linen cloth : of these materials, the birds select the coarser for the substance, the finer for the lining of the nest. They are sometimes prompted by instinct to build a nest on the pine branches, without the aid of the foundation of wood, or osier, provided for them ; but it is never very skilfully constructed, nor carefully finished. As is the case with most birds, the female is generally the builder ; while the male only chooses the place for the nest, and carries the materials. The female is incessantly in motion with the nest, and invites the male to the act of pairing, which generally takes place at that time, with an incessant chirruping. This is repeated more frequently as the time of laying the eggs approaches ; and between the first pairing, and the laying of the first egg, a period of seven or eight days usually intervenes. One egg is laid each day—generally at the same hour—till they reach five or six in number ; and the pairing continues up to the commencement of incubation. If the birds be good sitters, it is sufficient to leave them to themselves, without offering any artificial assistance. It is, however, usual to take the eggs away as soon as laid, supplying their place in the nest with an ivory nest-egg, and laying them up in a box in fine, dry river

sand. When the female has ceased to lay, the eggs are put back in the nest to be hatched. She lays three or four times a year, from April to September, and in some cases is so ardent in propagating the species, as not to cease laying even during the moulting season. The eggs are sea-green in colour, more or less spotted and streaked with reddish brown and violet. The period of incubation is thirteen days; and if it be suspected that any of the eggs are addled, the point may be ascertained by inspection of them, at the end of six or eight days. If at this period they be held up before a strong light, and appear to be full of blood-vessels, they are good; but if their substance appear to be clear and transparent, they may be thrown away as worthless. The male relieves the female at the labour of incubation during a few hours in every day; though the latter flies back as soon as her hunger is satisfied, and if the male refuses to give up his place, drives him from it with beak and claws. She is probably aware that he will perform his office imperfectly; will not turn the eggs sufficiently often, or will allow them to become too hot or too cold. The life of the young birds, even in the shell, is very precarious; and they are often killed by the discharge of a gun, the slamming of a door, or any other loud or sudden noise.

As soon as the young are hatched, a trough should be put into the cage, filled with a quarter of a hard-boiled egg, chopped small, mixed with a little wheaten bread, which has been soaked in water, and afterwards pressed dry. In a second vessel should be placed rape seed, which two hours before has been boiled, and afterwards washed in cold water, to take away all its pungency. For bread, some persons substitute biscuit; a change of very little real consequence. The main thing to be looked to, is, that no food intended for young Canaries should stand till it becomes sour. The chief occupation of the male now, for some time, consists in supplying the young with food; a labour which he takes almost wholly upon himself, probably with a view of allowing the female to rest, after the fatigue of incubation. If, in consequence of any accident, it should be necessary to feed the young birds by hand, the best food is wheaten bread, or biscuit grated fine, and mixed with rape seed crushed small. A little of this food, moistened with yolk of egg and water, should be given to each bird, by means of a

quill, ten or twelve times a day. About four quills-full will be found sufficient for a meal.

Up to the twelfth day the young are almost destitute of feathers, and need the warmth of their mother's wing; and it is sometimes the case, especially in cold dry seasons, that they never become properly fledged. A lady, who has paid a good deal of attention to this subject, Madame C. has observed that the growth of the feathers is promoted by a bath of luke-warm water. A similar immersion she has found to be of great use in aiding the young birds—when not yet hatched—to chip the shell. After the thirteenth day they are able to feed themselves; and when a month old, may be taken from the parent birds, and confined in separate cages, which it is advisable to hang at some distance from one another. For a few weeks, rape seed, soaked in the manner above described, should be mixed with their ordinary food; as a too sudden change of diet would probably have an unfavourable effect on their health during the moulting season.

When the young are from twelve to fourteen days old, the female begins to prepare for a second brood; builds a new nest, and has often laid her eggs, before the former brood are fully fledged. I must not, however, omit to state, that when a male has been paired with two females, in the manner before mentioned, one of which dies before her eggs are hatched, the other will receive them into her nest, sit on them till they are hatched, and treat the young birds with as much attention as her own. To do this, she will even avoid and repulse the caresses of her mate. It is alleged—not without some show of probability—that the healthiest and strongest Canaries are such as have been bred in garden aviaries, which afford abundant opportunities for exercise.

The Canary frequently pairs with birds of not dissimilar species, and produces mules, which propagate their kind. As we have before seen, the Linnet, Lesser Redpole, Goldfinch, Siskin, Serin and Citril Finches, are best adapted for this purpose. Experiments, also, with the Bullfinch and Greenfinch are said to have succeeded. If young birds of any of the above-mentioned species be taken from the nest at a very early period, and reared by hand, it makes no difference whether they or the Canaries be male or female.* Otherwise, it is best

* It is well known that the Canary has occasionally paired with the

to put an old tamed male of one of these species, with a female Canary ; as, although a female of some other bird might not reject the advances of the male Canary, she would feel a repugnance to laying in an artificial nest. The offspring of such connexions inherit the plumage of both parents. The mules of the Canary with the Linnet and Goldfinch are excellent singers ; while those with the Siskin and the Lesser Redpole are valueless in this respect. They are all to be treated like Canaries of a pure breed. All these bastards are said to propagate their kind ; and with regard to the Goldfinch and Siskin mules, the fact is well ascertained. It may be noticed, however, that the eggs of the first year are no larger than peas, and the young birds very small and weak. This is a defect which is less observable in every succeeding brood.

The young Canaries have been able to feed themselves in a fortnight, and in some cases sooner, they then begin to twitter ; though, even at this early period, the male may be distinguished from the female by the more connected character of his song. If a young bird is to be taught to whistle, it should be now separated from its comrades, and confined in a small wire cage, which should be covered at first with a linen cloth, and afterwards with some thicker material. A short air should then be either whistled, or played on a flute or bird-organ, within its hearing, five or six times a day, especially in

Sparrow, the Chaffinch, and the Yellowhammer ; though, from the difference of appearance and food, it is by no means easy to bring this about. I myself have never observed any sexual desire between Yellowhammers and Canaries of either sex, although resembling one another in appearance so closely, that the difference of species was hardly perceptible. I have, however, known cases in which an ardent Bullfinch has paired with an equally ardent hen Canary, though, with every care, it is very seldom that the eggs prove fruitful and produce young. I am informed by Dr. JASSAY, of Frankfort-on-the-Main, that he has bred mules between a male Bullfinch and a female Canary ; the eggs, however, having been hatched by another Canary. It is necessary, in this case, to select females which have no crest, as the offspring are distinguished by very large heads, to which a crest is a very doubtful ornament. " My Bullfinch," says he, " is so fond of his mate, that he cries incessantly when I remove him from her, and will not behave himself sociably with any other bird. I possess also a male Nightingale, which has long lived and sung in the same cage as a female Canary. They were both so ardent last spring, as to pair in my presence, but the eggs proved unfruitful. Should the same thing occur again, I will put the eggs under some other bird."

the morning and evening, and repeated on each occasion half-a-dozen times. After an interval of from two to six months, according to the memory and docility of the bird, it will have acquired its lesson perfectly. If, however, too long a period should have elapsed before the commencement of the instruction, it is not improbable that the bird will always intermix with his artificial song some portion of that which he has learned from his father.

It is also said that Canaries may be easily taught to come and go at command; but I must confess that the experiment never succeeded with me, although I have strictly followed all the directions which I subjoin for the benefit of the reader. The cages should be provided with doors which open only inwards, and which close of themselves. When the male and female have been paired, as above directed, the former is let fly in some garden where there are trees; the cage is then hung outside the window, that his mate may lure him back. This is repeated for five or six days, always letting the male go again without touching him, that he may not be terrified. After a time, the female also may be set at liberty, the door of the cage being left permanently open, that they may go and return at will. In this case they generally build upon lofty and bushy trees. Care must be taken to catch both the old and young birds in autumn, as there is danger lest they should fly off with the Linnets; with which birds they are very sociable, whether in confinement or at liberty.

Diseases.—The Canary, a bird which least of all others enjoys the healthful influences of fresh air and exercise, is subject to all the diseases mentioned in the Introduction. But besides these, it is especially liable also to the following:—

1. *Rupture.* This disease, which is not uncommon among young birds, seems to be a kind of indigestion, which results in an inflammation of the bowels. Its symptoms are a general thinness. The skin becomes bare on the part affected, puffed up, and full of small swollen blood vessels; the bowels descend to the extremity of the body, and appear black and knotted. The cause of the disease, against which all remedies appear to be unavailing, is a too great indulgence in nourishing food. A little alum, salt, or a rusty nail, in the water vessel is occasionally of some service.

2. *The Egg Rupture,* if not so immediately fatal as the

former disease, is hardly less so in the end. It consists of an obstruction in the passages by which the eggs are extruded, which gradually increases in size till it results in the death of the bird. A characteristic of this disease is, that the birds often fancy they have laid, and begin to brood accordingly.

3. *The Yellow Scab* on the head and eyes may be cured by nourishing food. If, however, a small ulcer, like a grain of hemp seed, should make its appearance, it should be cut off, and the wound anointed with a little fresh butter, or bathed in urine.

4. *Sweating* is a disease to which sitting females are liable, and which often destroys the brood. If it be remarked that a hen's feathers are wet, her body should be washed in salt and water, and again, after the lapse of a few minutes, in fresh water, which is allowed to dry in the sun. This is to be repeated once or twice a-day. The disease, however, is not so detrimental as is generally supposed.

5. *Asthma*, which often arises from a disordered stomach, may be relieved by the use of soaked plaintain and rape seed.

6. *The Sneezing*, which is produced by an obstruction in the nostrils, may be cured by passing a very fine feather through them.

7. *The Loss of Voice*, which in the male is sometimes the consequence of moulting, may be cured by the use of the food prescribed for the young ones. Lettuce-seed is also a specific for this disease, and some bird-fanciers put a bit of bacon in the cage for the bird to peck at.

8. *Constipation* is most effectually relieved by the use of green food, especially lettuce and water-cress.

9. *Epilepsy* is produced in Canaries, as in other birds, by causes with which we are not acquainted. They seem, however, to be especially liable to it from their great delicacy and timidity, as they are attacked by it when it is attempted to clean their cages. Sometimes it even follows an exposure to a draught. It may be cured by the means described in the Introduction.

10. *Overgrown Claws and Beak*. Both beak and claws occasionally require to be clipped with a pair of scissors, though in the latter case care must be taken not to cut too deep, and so lame the bird by consequent effusion of blood. If the part be held up to the light, the termination of the blood-

vessel—beyond which it is not safe to cut, may be distinctly seen. The claws of brooding hens ought sometimes also to be cut, as otherwise they become entangled by them in the nest. The consciousness of having very long claws, and the fear of becoming fast in the wire of the cage, often make Canaries melancholy, and take away the desires of food.

11. *Lice.* Canaries when diseased, or not kept with sufficient cleanliness, are often very much plagued with these little creatures, and manifest their uneasiness by constant restlessness. Frequent bathing and a clean cage, strewed with dry sand mixed with a little crushed aniseed, are the best preventives. It is also a good plan to substitute for perches of solid wood, others of reed or elderwood, into the cavities of which the insects creep, and from which they may be daily dislodged.

If Canaries breed, they rarely live more than ten years, but under other circumstances, they may be preserved with care for twice that period.

Attractive Qualities.—The Canary has always been a favourite Cage-bird, not only on account of the beauty of its plumage and the excellence of its song, but also of its docility, affectionate disposition, and the readiness with which it breeds in confinement. Another source of gratification connected with this bird is the observation of its peculiarities of disposition. Some are melancholy, others lively; some of a peaceful, others of a quarrelsome disposition; some docile, others stupid; some eager to pair, others delighting in solitude, &c. Their chief recommendation, however, consists, beyond doubt, in their loud, lively, and various song, which is continued throughout the year, in some cases, even in the moulting seasons. Some, which are very much esteemed, will sing even at night, if a light be placed near their cage; a peculiarity which, though natural in some, is in most, the result of long training. The singers of the Tyrol, so called from the country where they are caught, which imitate the Nightingale's song, are considered to hold the first rank; and next to these the English Canaries, which have acquired the warbling of the Wood Lark. In Thuringia, those are most esteemed which, instead of a sonorous song of their own, have been taught to descend through the notes of an octave in a clear silvery tone, occasionally introducing a trumpet-like song, *Terteng.* In the pairing season, the males some-

times sing so long, and with such vigour, as to burst the large blood-vessels of the lungs, and thus fall off the perch in the midst of their song, and die instantly.

In spring, when excited to pairing by the constant invitation of her mate, the female utters a few harsh, unconnected notes. In the case of one which is too old to breed, these notes are sometimes heard throughout the year.

The Canary is remarkable also for its good ear and memory, and its capability of reproducing all sounds, of whatever species. The variety of its ordinary song, indeed, arises from the fact that it imitates the songs of all birds which it has heard when young ; and it will also learn to execute two or more airs, or tunes, which it has been instructed as above described, in proper time and tune. Instances have also been known in which it has been taught to repeat short words distinctly, to distinguish names, colours, letters, and numbers, and to perform certain actions at the word of command. I once saw a female, in the possession of a person named Jeantot, of Befort, in Alsace, which selected from an alphabet, and placed in order, the letters of certain words ; added, subtracted, and multiplied in German, and indicated, by means of numbers, the exact time of a watch. He had also three males with him, which were able to select letters and numbers which were named. Hunger had been the chief means used in the education of all. Some years ago, also, Canaries were exhibited which performed many curious feats, and, among others, enacted a trial and execution. A Canary was brought from prison by his comrades, who formed a circle round him ; one lifted up his leg, as if to behead the culprit, who straightway fell down, pretending to be dead ; he was then carried off and buried in sand, while others accompanied the ceremony by whistling a dirge.

I will conclude this article by giving some rules, by the observance of which, the possession of a good singer may be ensured. The first and chief thing is, that when young the bird should hear none but a good song, and so not be tempted to intermix the notes of other birds with his own. Care must be taken to attain this object, not only at first, but at the first and second moultine season, as the bird is then obliged to re-learn his song, and might introduce into it some foreign admixture. Here, too, may be remarked, a difference of capability

in different birds. It should also be noticed whether the bird prefers to sing alone, or in company. Many birds are so self-willed as never to sing except they can display their vocal powers alone, while the song of others is always soft and low, except when excited to rivalry by hearing the performance of a neighbour. Another very important particular to be attended to, not only in the case of Canaries, but of all Cage-birds, is to give them their allotted portion of food every day; for if too large a supply be given them at once, the result is, that they pick out the best at first, and leave the rest for another day, which impairs their vocal powers. Four tea-spoonsful of the dry food above described, is sufficient for the daily supply of each bird; and whatever they leave, may be given to the other birds of the aviary, which are fed on the universal paste, as an agreeable change.

ADDITIONAL.—The date of the first introduction of the Canary into England is not exactly known. GESNER, who wrote in 1585, makes mention of it; and ALDROVANDUS, in his *Ornithology*, printed at Frankfort in the year 1610, gives the first good description of the bird (vide vol. ii. p. 355). WILLOUGHBY, in his *History of Birds*, speaks of Canaries as common enough in his time. Writers seem generally to concur in supposing that their original colours were green and yellow. PENNANT says that he once saw some small birds brought directly from the Canary Isles, which were said to be the genuine sort; they were of a dull green colour, but as they did not sing, were suspected to be hens. MR. DAINES BARRINGTON also records having seen two birds which came from the same quarter, neither of which had any song at all, and he was informed that many others were afterwards brought from thence with the same defect. According to the accounts of navigators, there are birds in the Canary Isles with a sweet and lively song; but whether they allude to this particular species or not, we cannot tell. On the whole, it seems likely that the melodious strain which this beautiful songster pours forth from cage and aviary, is in a great measure artificial. The bird is remarkable for its imitative powers, and great pains are usually taken in the education of the little musician, so that we have really no opportunity of judging what its “native wood notes wild” are like. BUFFON draws a parallel, or rather a contrast, between this bird and the Nightingale. “If,” says he, “the Nightingale is the chauntress of the woods, the Canary is the musician of the chamber. The first owes all to nature; the second derives something from our arts: with less strength

of organ, less compass of voice, and less variety of note, the Canary Bird has a better ear, greater facility of imitation, and more memory ; and as the difference of genius, especially among the lower animals, depends in a great measure on the difference that exists among them, with regard to the perfection of their senses, the Canary Bird, whose organ of hearing is more attentive and more susceptible of receiving and retaining foreign impressions, becomes accordingly more social, more tame, and more familiar. It is capable of gratitude, and even of attachment ; its caresses are endearing, its little humours are innocent, and its anger neither hurts nor offends. Its education is easy, we rear it with pleasure, because we are able to instruct it ; it leaves the melody of its natural note to listen to the harmony of our voices and instruments ; it applauds, it accompanies us, and repays the pleasure it receives with interest. The Nightingale, more proud of its talent, seems willing to preserve it in all its purity ; at least, it appears very little to value ours ; and it is with the greatest difficulty it can be taught to repeat any of our airs. The Canary can speak and whistle ; the Nightingale despises our words as well as our song, and never fails to return to the warbling of its own wild wood-notes. Its pipe is a master-piece of nature, which human art can neither alter nor improve ; that of the Canary Bird is a model of more pliant materials, which we can mould at pleasure. This last, therefore, contributes in a much greater degree to the comforts of society ; it sings at all seasons ; it cheers us in the dullest weather ; and even adds to our happiness—for it amuses the young, and delights the recluse ; it charms the tediousness of the cloister, and exhilarates the soul of the innocent and the captive.”

This author enumerates as many as twenty-nine varieties, and many more might be added, were all the changes incident to a state of domestication brought into account. “The breeding and rearing of these charming birds,” says BOLTON, “forms an amusement of the most pleasing kind, and affords a variety of scenes highly interesting to innocent minds.” In this country, no less than in the old German “Fatherland,” and amid the green valleys of the Tyrol, many enthusiastic Canary fanciers may be met with. There are societies in London for promoting the breed of Canaries ; and amateurs distinguish upwards of thirty varieties : these varieties are separated into two great divisions, the Plain and the Variegated ; the former being called Gay Birds, or Gay Spangles, and the latter Fancy Birds, or Mealy Birds ; these latter are esteemed the strongest, and have the boldest song. Jonks, or Jonquils, is also a term applied to those of a pure yellow. There is also a variety called the Lizard, the plumage of which is

of a greenish bronze throughout, excepting the upper part of the head, which is covered by a patch of clear yellow, and this variety is looked upon as the nearest of kin to the original stock. "The back," according to a recent writer on prize Canaries,* "being marked with spangles in uniform stripes, corresponding with the trapezins, is an indication of the primitive state, the unsophisticated produce of nature being precise and geometrical."

Of the last named of these varieties, the genuine *Lizard*, we may remark, that it is a very beautiful bird, and highly valued, especially by the weavers of Nottingham, who produce some of the best specimens; it is not, however, considered a regular prize bird, that honour being reserved for the varieties called the Mealy Birds and Jonquils, to which we shall presently more fully allude. In support of the opinion that the *Lizard* approaches most nearly to the primitive type, it is stated by the authority above quoted, that "the prize birds, previous to the first moulting, appear in a plumage nearly similar to that of the *Lizard*, the only difference being, that the young birds are of a brownish hue, while the green coat of the *Lizard* is set off by a gloss of fine grey, similar to the effect of light upon an antique bronze. The legs of the prize bird are likewise represented by those of the *Lizard*, as they continue of a dark colour." The *Spangled-Back*, of which we next speak, was a great favourite with the "fancy" some twenty years ago, but is not now thought so much of, although it still has its admirers. In its plumage we see the same process with regard to the markings as were noticed in the *Lizard*, but much more broken up and diversified; "an evident sign," says our authority, "of degeneration." Among the canons of criticism adopted by the Canary societies, we find the following:—"No bird shall be considered a fair show-bird that has a feather or feathers without black, in stalk or web, on the flight or tail feathers; or that has less than eighteen flying feathers in each wing, and twelve in the tail." Next to the perfection of wings and tail, these being defined by their black feathers forming a clear "saddle," or absolute separation of colour from the wing coverts—the qualities which entitle show-birds to notice are as follows:—

The *Jonquil*, as its name denotes, is required to be of a pure deep yellow, entirely free from any green tinge; the colour is deeper on the cap over the eyes, and on the scapulars.

In the *Mealy-bird*, the golden plumage of back, breast, and head, appear frosted over, or powdered, through the small feathers, thus producing a whitish edge. In both of these varieties the purity of development is the criterion of excellence, and the first

* See *Illustrated News*, Dec. 12, 1846.

prize is adjudged to the bird whose colour is most perfect. In these birds a superiority of form (the result of high breeding) will be discovered, but such a quality is not recognized by the judges.

"After the second moult, the Canary is no longer a show bird, the dark feathers in the wings and tail then disappearing entirely.

"The nest feathers are, as has already been stated, similar to the appearance of the Lizard. The first moulting, which occurs in the autumn of the first year, removes the short feathers only; these are replaced by the pure plumage, which appears first in two clear yellow bands over the pectoral process, and then spreads over the whole of the upper part of the bird, leaving the quill feathers in their original black state. The Canary is then in its most perfect state as a fancy bird, and it loses this distinction immediately after.

"Among other points of nice attention which are required during the moult, it is necessary to observe if any of the quill feathers should happen to be prematurely shed (beaten out), in which case they would be reproduced colourless, or 'foul'; to provide against this, it is the practice of breeders to extract the growing feather when in the blood, or while it performs a part in the circulation. This being done, the uniformity of black feathers continues uninterrupted.

"In breeding the fancy birds, great proficiency is shown in judicious pairing. A Mealy-bird and a Jonquil being put together, the produce will not prove a mixture of the qualities of the parent birds, but the character of the one or the other will appear distinct, and the produce of the nest will probably show specimens of each kind, Mealy and Jonquil. It is a curious fact, that the Mealy-bird may be distinguished at six days old, by the invariable appearance of five feathers on the crest of the ilium, which are not developed by the Jonquil in any case.

"The pious and excellent DR. WATTS has borne testimony to the harmony of the early condition of little birds. 'Birds in their little nests agree,' but it is well for the sake of veracity in this instance, that the worthy doctor stopped there; for no sooner have the young of the Canary scrambled from the procreant cradle, than they will fight like young harpies.

"The above union, *i. e.* that of the Mealy and the Jonquil, is considered favourable to the production of pure birds; but if two strong birds are associated, the result will be an overcharge of colour in the offspring.

"Another unfavourable consequence appertaining to the union of two Jonquils appears, when the practice is continued, in a deterioration of the web of the feathers, which become frizzled and insufficient to cover the body, and the proper complement of tail

and wing feathers will be wanting. A curious example of this kind appeared in a bird of our acquaintance. This specimen had failed to develop more than one single feather, the remainder of its body appearing like the scanty plumage of a Friesland hen. It was the habit of this odd bird to toy with the solitary feather which constituted its caudal appendage, by drawing it through its beak until it became quite curled up by such manipulation. The above propensity to make both ends meet is not an uncommon vice among better fledged birds ; and it is the practice of attentive breeders to prevent it, by hanging a piece of string from the top of the cage, in order to divert the notice of his restless charge.

"The hen Canary produces on an average four nests annually. The number of thirty-eight birds have been bred from two pair of birds, and the produce of one cock and two hens has been known to amount to as many as forty ; but these are extraordinary instances. However, the many casualties to which the young birds are liable operates as an effective check to their increase, and the breeder is considered to do well who produces half-a-dozen male birds of each sort in the year."

It appears that Canary Societies have existed in this country for upwards of a century, although there is no account of their origin and progress until within the last fifty years. We quite agree with the writer above quoted, that "it is much to be regretted that such societies have not preserved any connected record of their transactions, together with some account of their observations upon the progressive changes which their exertions have effected upon the appearance of the bird."

The amount of the prizes offered by these societies appears to vary in accordance with the number of the members : the prizes are generally ten in number, and are appropriated to the five best birds in degree of each favourite kind, viz. the Mealy and the Jonquil. The principal shows are held in London, at the latter end of each year. The specifications above laid down form the leading features of excellence, but it is generally the custom of the societies to produce, or describe, a model bird at one show, and award the prizes to those exhibitors, who at the next produce birds which most closely resemble it.

Besides the different varieties of which we have already spoken, there is a rare one, much admired, called the *Cinnamon Canary*, of which the Norwich weavers are the principal producers ; it is to this class of men, as to those who follow similar occupations in Germany and elsewhere, that we are indebted for the finest of our trained singing birds, and careful and experienced trainers will often make very considerable sums by this mode of occupying

their leisure hours. We have it on the authority of BOLTON, that four Tyrolese generally bring over about sixteen hundred Canaries annually, which cost them about twenty pounds, and for which they get on an average five shillings each. "Most of these birds," he adds, "have been educated under parents, the progenitors of which were instructed by a Nightingale; they are much valued for their song." With the birds brought up in this country, the song generally partakes of a mingled character, those of the Nightingale and Titlark, or Linnet, being the most closely followed.

GILBERT WHITE asks:—"Might not Canary Birds be naturalized to this climate, provided their eggs were put, in the spring, into the nests of some of their congeners, as Goldfinches, Green-finches, &c.?"

Had the naturalist of Selborne been living at this time, he need not have queried the practicability of this. WILLIAM WOLLASTON, Esq. of Welling, in Kent, an amateur breeder of Canaries, has had those birds building their nests, and rearing their young, in his shrubberies for some years past.* It is true, a home is provided for them to retire into in the winter season, so that they can scarcely yet be considered as thoroughly acclimated; they are also furnished with appropriate food; but there seems little reason to doubt that eventually the Canary may become, in some of our most sheltered and southerly counties, a wild bird of the copse and woodland. The experiment of inducing these birds to nest and breed in the open air has also been successfully tried in the grounds of the Queen's marine villa, Osborne House, in the Isle of Wight.

The following observations on *the Diseases of the Canary*, by an English dealer in Song Birds,† may well be added to what BECHSTEIN has written upon this subject, as they furnish directions for treatment in some cases of sickness of which that author makes no reference:—

In treating of the disorders of Canary Birds, Mr. NASH says—"I shall first consider those to which the hen is subject, whilst in the breeding cage.

"When the hen has built her nest, she is often observed to appear thick and heavy, in which case she is breeding her egg, and ought to have a little bread and milk, and a few oatmeal groats: I have always found that this has afforded great relief. The groats may be given every day whilst she is laying, as it keeps

* For an interesting account of a visit to Welling, see *Kidd's Journal*, vol. i., in which will also be found articles by the Editor on Canaries and other Birds of Song; evidently the result of long experience and close observation.

† Mr. NASH, Great Windmill Street, London.

her in fine condition, though the bread and milk ought to be sparingly administered, it being apt to make her too weak and relaxed; indeed, it ought never to be given unless the hen be seriously unwell.

" It occasionally happens also that the hen finds great difficulty in laying her egg, a complaint which is sometimes fatal; when this occurs, I have found that the least drop of salad oil applied to the parts, have afforded immediate relief, and enabled her to lay her egg with ease; a warm bath is also a good thing when the hen is in this state. As soon as you observe that she labours under this difficulty, take her gently out of the cage and hold her body in some warm water for a few minutes; in doing this, however, the greatest care must be taken that you do not break the egg, for in that case you will run great risk of losing the bird. When you have given the hen the warm bath, put her carefully back again into the breeding cage, when she will go on her nest and lay her egg with the greatest ease.

" Canary Birds are also subject to the pip, which is a little pimple that comes on the rump, and which sometimes goes away of itself; if, however, at any time it should prove tedious, it may be opened with the point of a fine needle, the matter squeezed out, and a little loaf sugar, moistened in your mouth, laid on the sore, by which it will soon be healed.

" There is another disease to which young birds as well as old ones are subject, and which consists in a swelling of the body; to ascertain whether this be the case, catch the bird and take it out of the cage, blow the feathers on one side; when, if the body appears to project beyond the breast-bone, it is a sure sign that the bird is afflicted with this disorder, for which a little scalded bread and rape seed, prepared as follows, I have found to be an excellent remedy. Take a small piece of stale bread, pour a little boiling water over it, and when it has stood a few minutes, squeeze it quite dry. Next pour some boiling water over a little rape seed, and let it stand covered over for five minutes, when the water must be poured off, and the rape seed rubbed dry in a cloth; when this is done, take a knife, and having bruised the seed with it, mix it with the bread which you have previously scalded, so as to make a kind of paste.

" This disorder generally proceeds from the birds' taking cold, either through being hung in a draught of air, or more frequently from their being allowed too much water to wash in, a circumstance which ought particularly to be guarded against, more especially when the birds are moulting, as at such times they are extremely tender, and apt to take cold, owing partly to the disordered state of their bodies, and partly owing to their being thin of fea-

thers ; the more indeed that the birds be kept from the cold air whilst moulting the better, for I have known many valuable birds lost, by being stopped in their moult, through taking cold.

"When a bird begins to drop its feathers, I strongly recommend that the cage be covered over with baize, or flannel, so as to keep it quite warm, by which means the bird will throw off its old plumage, and get its new much quicker and handsomer than when it is allowed to moult in an open cage ; the sooner also that a bird gets through its moulting the sooner it will be in song, which ought to be an inducement for the keepers of singing birds to adopt the plan recommended above."

We may add to this the recommendations of WILLIAM KIDD. "When a Canary moults, which is generally in July or August, according to the heat of the weather, all you have to do is to keep him quiet and free from draughts. Being a cheerful, lively bird, there is no need to have him covered up, but do not let him be unduly excited ; give him a very small quantity of raw beef, scraped and moistened with cold water, once a week, occasionally a little yolk of a hard-boiled egg, and now and then a piece of sponge-cake, and ripe chick-weed in full flower. Nature will do the rest, and present your pet with a handsome new suit, that shall keep him spruce, and last him a full year. Mind and trim his claws when they are too long ; use sharp scissors always, a knife never. In handling him, let him be as passive as possible, so that your hand may not press unduly on any part of his little body. After the first operation he will understand all about it, and cheerfully submit to be trimmed." The moulting time is, of all others, the most critical and dangerous period in the lives of Canaries ; therefore it is that we are inclined to quote somewhat largely what the best authorities have written on this head. H. B. HIRST, in his *Book of Cage-Birds*,* says : "The time at which young birds, to whom it is most dangerous to moult, commence is when they arrive at the age of six weeks, and it continues for a couple of months. The symptoms of its approach may readily be seen. The birds become sad and sleepy in appearance, and sit upon their perches, or the bottoms of their cages, with their heads under their wings, for the greater portion of the day, while the floors of their cages are covered with small pen feathers, which they shed during all the time until the new ones appear. They likewise eat very sparingly, and only of that description of food which they most prefer, which should always be supplied to them.

"Great care must be taken at such time to give them the richest kinds of food, such as hemp-seed and sponge-cake, with a lump of loaf sugar for them to peck at occasionally. One of the dead-

liest things that can happen to the Canary is to be put at this season in a cold place, or where a draught can reach him. He should be kept in the warmest room, and be put every day in the sun, which should shine on him through the glass. Should the moult prove uncommonly bad, take a piece of sponge-cake, soak it in sherry wine, and give it to him ; this will invigorate and do him much service. After this, and every day or two, as long as he seems drooping, blow a little sherry wine over his feathers, and then place him as before, in the sun or near the fire. A lump of refined liquorice may also be thrown in his water, and, occasionally, a little saffron. Be careful that your birds, during this time, are kept supplied with coarse sand or gravel, which is now doubly beneficial to them, and a great assistance in casting their feathers.

"For *surfeit*, which sometimes occurs in young birds of from a month to six weeks old, as well as occasionally in old ones, this author recommends a small piece of alum or of rusty iron placed in the water, or a little common salt. Wheaten bread and canary seed boiled in milk are also recommended, as well as a tepid milk bath, to be succeeded by one of water of the same temperature, the bird to be well dried afterwards, and fed sparingly with lettuce seed ; this treatment to be continued for two or three days.

"When *Pip* makes its appearance, the birds should be fed on cooling seeds, such as lettuce or rape ; if not very bad, the birds may be suffered to break the sore themselves ; but if they appear very heavy and sleepy, they require immediate attention : the upper half of the swelling is to be carefully and gently cut off, the matter pressed out, and the sore touched with a little salt, previously moistened with the mouth ; a further application of moistened brown sugar is to be made, if this treatment appears to cause much pain. Until the boil is sufficiently ripe for cutting, it, and the parts about it, are to be rubbed with a feather dipped in olive oil.

"The best remedy for *Scabs on the Head* is light and cooling food, such as lettuce and rape seed, and quietude.

"The presence of *Red Mites* may be known by the bird's pluming and feathering himself at all hours of the day—a thorough cleansing of the cage is the remedy prescribed."

Diarrhœa is a very common sickness with the Canary, for which neither BECHSTEIN nor NASH prescribe a remedy ; "it may readily be cured," says our author, "by the application of a little sweet almond or olive oil to the belly of the patient, the food to consist of a little cantelope-melon seed, bruised, the yolk of hard-boiled eggs, sponge-cake, and slightly scalded lettuce."

These birds have sometimes a strange kind of croaking in the

voice, and difficulty of breathing, the result of *asthma*; the best remedy for this disorder is sponge cake soaked in sherry-wine, and a few wild plantain leaves inserted in the cage every day.

For *perspiration* the same treatment as that recommended by BECHSTEIN is the mode of cure.

Cancer is a fatal disease, said to be very prevalent among Canaries, and seemingly contagious, always attacking the bird in the foot or the bill, which become much swollen. The curative process is to keep the cage constantly clean, so that no particles of dust or dirt may adhere to the schirrus part, and to bathe it frequently with sweet almond or olive oil, and wash with lukewarm milk.

Costiveness.—See BECHSTEIN on “*Constipation*;” rape-seed, chick-weed, and lettuce-leaf, with a piece of sugar-candy in the water.

Want of appetite usually occurs after breeding, moulting, or other sickness: in this case, take a handful of millet, canary, rape, yellow, and a little hemp seed, mixed with the same quantity of moistened garden loam; knead well together, then dry the composition, and cut up into small pieces, and give to the bird as required. Will keep good a great length of time.

Broken Limbs: When a bird meets with an accident of this sort, it should be taken very tenderly and placed in a cage without perches, with a little soft hay, and his seed-box and water-fount on the floor of the cage, which should be covered round with a cloth, so that the bird may not be excited to move and flutter about; Nature will then do its work, and generally effect a cure in a few days.

Decline: It sometimes happens that a hen bird, which is kept from breeding, will fall sick and die, without exhibiting any symptoms of disease. This arises from being denied the society of the male bird.

We have now given what we imagine a tolerably complete list of the ills and casualties of Canary life in a state of confinement, with their appropriate remedies, and we shall, in the words of our American author, “close the section by recommending the amateur, or professional fancier, to keep a separate or hospital cage, for those which happen to be sick. This should be made of wood, with dark sides and a wicker front, covered inside with thick flannel. Most of the diseases which attack the Canary are contagious, and if the sick be kept in the same cage or apartment with healthy birds, they may cause the loss of an entire collection. Besides, they require different food and more agreeable treatment than those in a good state of health.” The following is this author’s receipt for making

GERMAN PASTE.

"Bruise in a large mortar, or on an even table, with a rolling pin, a pint or quart, as may be required, of rape seed, in such a manner that you may blow the chaff away ; to this add a good-sized piece of bread, reducing the whole to powder, and well mixing together ; put them in a box of oak, which should be kept from the sun. A tea-spoonful of this powder with the addition of a little hard yolk of egg, and a few drops of water, will make an excellent food for young birds ; to the old ones it may be given dry. The powder must not be kept longer than twenty days, as the rape seed is apt to turn sour, so that when the water is put to it, it smells like mustard. It is best to make a small quantity of this paste every day ; under such treatment the young birds grow more rapidly. Stale sponge-cake, rubbed to powder, with the addition of hard white of egg, is the best food for young birds during the first three or four days after they are taken from the care of their parents."

FOREIGN FINCHES.

118. THE GLOSSY FINCH.

Fringilla Nitens, LIN. *Moineau de Bresil*, BUF. *Der glänzende Fink*, BECH.

Description.—This bird is four inches and a half long, and somewhat smaller than a House Sparrow. The beak and feet are flesh-coloured ; the iris white ; the whole plumage a blue black, or coal black, with the gloss of polished steel. The female is blackish on the upper part of the body, bordered with yellowish brown ; behind the eyes is a blackish stripe ; the rump is grey ; the belly dark yellowish brown ; the tail black, with a grey border ; the feet red. In some males, both beak and feet are black.

Observations.—This bird is met with in the woods about Carthagena and in Cayenne. It has a very agreeable voice, and exerts itself in singing so much as to ruffle the feathers of its head and neck. It feeds on all kinds of seeds and fruits, is easy to tame, and when caged becomes fond of bread. The best food for it, however, is millet, rape, and poppy seed.

119. THE PURPLE FINCH.

Fringilla Purpurea, LIN. *Bouvreuil Violet de Caroline*, BUF. *Der Purpur Fink*, BECH.

This bird is as large as the common Chaffinch, and five

inches and a half long. In colour it is dark violet, or purple, with a tinge of dark brown; the quill feathers are brown inside; the belly white; the tail rather forked. The female is dark brown all over, the breast being spotted with white, like a Redwing.

Observations.—In Carolina these birds are common in summer, but in winter they depart in smaller flocks. They live principally on juniper-berries of which, when confined, they are fond. They are fed on rape and canary seed. They are soon accustomed to the food of the aviary. They are more esteemed for their beauty than their twittering song.

120. THE AMERICAN GOLDFINCH.

Fringilla Tristis, LIN. *Chardonneret Jaune*, BUF. *Der Americaniche oder Gelbe Stieglitz*, BECH.

Description.—The American Goldfinch is four inches and a half long, and about the size of a Linnet. The beak and feet are white; the iris nut-brown; the fore part of the head black; the rest of the body yellow; the shanks and the tail coverts yellowish white or grey; the wing coverts black, with a white transverse band, formed by the points of the white coverts; the quill feathers black, the edges and points of the hinder ones white; the tail black.

The female has no black on the fore part of the head; the upper parts of the body is olive green; the throat, breast, and rump, clear yellow; the belly and vent white; the wings and tail like the male, but lighter in colour. The young bird is at first like the female in every respect, except that it has the black forehead.

These birds build twice a year, in autumn and spring, and have the colours described above only in summer. In winter, the male is black on the top of the head; the throat, the whole of the neck, and the breast, are yellow; the rump also yellow, somewhat tinged with white; the back olive brown, with the edges of the feathers lighter; the wings and tail black, though almost all the feathers have a white border. The female is similar, except that her colours are generally duskier, and that she has not the top of the head black. It is plain from this, that these birds in winter bear a strong resemblance to our Siskins.

Observations.—These birds are met with in North America;

in summer, in the State of New York especially. Like our Goldfinches, they live on thistle seeds, with which they are to be fed when caged. They become exceedingly tame.

121. THE BRAZILIAN FINCH.

Fringilla Granatina, LIN. *Le Grenadin*, BUF. *Der Brasilische Fink*, BECH.

Description.—The Brazilian Finch is as large as a Siskin, four inches and three quarters in length. The beak is coral red; the iris dark brown; the eyelids scarlet; the feet light grey; the sides of the head, round the eyes, purple; the upper part of the base of the bill blue; the throat, the under part of the belly, and the shanks black; the under part of the head and body chestnut-coloured; the back and the scapulars inclining to brown; the rump blue; the quill feathers brown; the tail wedge-formed and black.

These birds are by no means uniform in colour. Some have a brown spot between the beak and the eyes, and the back part of the body, both above and below, violet. In other specimens the under part of the belly, and the shanks, are of the same colour as the upper, while the throat is greenish brown. In others, again, the tail is reddish.

The female has a red beak, and a purple spot under the eyes. The top of the head is reddish yellow; the back greenish grey; the throat and the under parts a light reddish yellow; the lower portion of the belly and the vent whitish; the rest much as in the male, but duskier in colour.

Observations.—This handsome bird is a native of Brazil. In the form of the beak it resembles the Goldfinch, and is fond of the same food. Its motions are lively, and its song exceedingly pleasant.

THE BLUE-BELLIED FINCH.

Fringilla Bengalus, LIN. *Le Bengali*, BUF. *Der Blaubauchige Fink*, BECH.

Description.—This bird is hardly larger than the Siskin, being four inches and a half long, of which the beak measures four lines, and the somewhat wedge-shaped tail one inch and a half. The bill is compressed at the sides, very pointed, and of a red flesh colour. The iris is nut-brown; the feet light brown; the upper part of the body an ashen brown, with a purple gloss; the sides of the head, the under part of the neck, the breast, belly, rump, and vent, a light or azure blue.

The sides are spotted with ashen grey; a crooked purple spot extends under the eyes to the back of the head; the quill feathers are dark brown, with ashen brown edges; the tail blue. The female has no red spot under the eyes.

These birds also vary in colour, perhaps only from difference of age. Specimens are found which are grey on the back; others having the same colour on the under part of the body, and others, again, on whose belly a red tinge may be remarked.

Observations.—These are African birds, which are brought to Europe principally from Angola and Guinea. Their movements are lively and engaging; and the song of the male, though not loud, is agreeable. They are fed on canary, bruised hemp, and poppy seed.

123. THE LIVER-COLOURED FINCH.

Fringilla Hepatica, LIN. *Der Leber Carbone Fink*, BECH.

Description.—This, which is almost as large as the preceding species, measures in length four inches, for which four lines are to be taken for the beak, and one inch and three quarters for the wedge-shaped tail. It resembles it also in colour, though different in air and behaviour. The beak is in shape like a House Sparrow, blood-red with a sharp point; the eyelids are bare and yellow; the iris a reddish brown; and the feet flesh-coloured. The cheeks, the throat, half the breast, the sides, and rump, are a dirty greenish blue; on the cheek is a dark purple spot. The upper part of the body is a dark liver colour; the belly the same, but lighter; the wings dark brown; the edges of all the projecting feathers like the back; the tail dark brown on the inner side, on the outer inclining to blue, with black tips.

Observations.—This bird inhabits the African coasts, and is very cheerful. Its cry is “*Tza*,” and its weak song resembles that of the Wood Wren. It is fed on canary seed, and seems to have a long life.

124. THE GREEN GOLDFINCH.

Fringilla Melba, LIN. *Chardonneret Verd*, BUF. *Der Grüne Stieglitz*, BECH.

Description.—This bird, not unlike the common Goldfinch in size and form, is four inches and a half long, of which the beak measures half an inch, and the tail one inch and a half. The beak is compressed at the sides, ends in a long point,

somewhat bent at the front, and flesh-coloured. The iris is chestnut-coloured; the feet grey; the front of the head to the eye, as well as the throat, deep red; the top of the head, the upper part of the neck, and the back are yellowish green; the wing-coverts and the hindmost quill feathers are green, edged with red; the large quill feathers dark brown, bordered with a delicate yellowish green; the breast olive green, inclining to white on the belly. The whole lower part of the body is covered with long dark brown spots; the rump and tail red, the latter being ashen grey on the under side.

The female has a bright yellow beak; the top of the head and neck are ash-coloured; the small wing-coverts and the rump yellowish green; the tail brown, with a pale red border. In other respects it is like the male.

Observations.—This bird is a native of Brazil. The male is attractive, on account both of his song and beautiful plumage. It is kept in a cage, and fed with canary and rape seed, on which diet it may be preserved in health for many years.

125. THE ANGOLA FINCH.

Fringilla Angolensis, LIN. *La Vengoline*, BUF. *Der Angolische Hänfling oder Fink*, BECH.

This bird resembles our common Linnet in form and habits. It is four inches and a half long, of which the tail, which is somewhat forked, measures one inch and three quarters. The beak is short, rather round, blunt, and a dirty flesh-colour. The feet are flesh-coloured. Round the beak, as far as the eyes and throat, it is black; round the eyes and at the side of the throat spotted with white. The upper part of the head and neck, the back, and the small wing-coverts, are a brown ash colour, every feather having on it a dark brown, egg-shaped spot, which is also found on the side of the neck. The under part of the body is orange, brightest on the breast, and growing darker towards the vent; the rump dark yellow; the larger wing-coverts and the quill feathers dark brown, with a yellow edge; the tail dark brown, with a rusty grey border and tip.

Observations.—This bird is a native of Angola. It has a flute-like song, resembling that of our Linnet, but more melodious. It is fed with canary and rape seed. The young birds have the same plumage as the females.

VI. SINGING BIRDS.*

In these birds the beak is soft, generally conical, though sometimes approaching to the cylindrical form; pointed, and having the upper mandible fixed. Their usual food consists of insects, though some of them subsist partly on worms and berries. Their nests are well built; and the male shares with the female the labour of incubation.

[In this division it will be seen that the German naturalist has included a great number of birds differing very considerably in their general habits and conformation; collectively, they are fully entitled to be distinguished as "Songsters," for among them are several which excel all other birds for the compass and variety of their notes. We have here the whole of the genus *Sylvia*, or soft-billed warblers, to which Mr. SWEET's valuable observations were confined, and several others which have no place in that genus. To some of the species, the term songster would seem ill applied, as they scarcely sing at all, so that in looking at the whole group, we are reminded of the words of PLINY:—"Secundus ordo qui in duas dividitum species, *Oscines et Alites*: illarum generi cantus oris, his magnitudo differentium dedit." (B. 10. c. 42.)].

(A.) INDIGENOUS BIRDS,
TAMEABLE WHEN OLD.

126. THE SKYLARK.

Alauda Arvensis, LIN. *Alouette*, BUF. *Die Feldlerche*, BECH.

Description.—This bird is so very well known, that were it not on account of its similarity in plumage to other birds of the same species—and for the sake of those inhabitants of large towns, who may not have the opportunity of comparing it with them—it would scarcely be worth while to give a detailed description of it.

The Skylark is rather larger than the Yellowhammer, being seven inches in length, of which the tail measures almost three inches. The beak, as in all birds of this species, is soft, straight, and conical. The mandibles are of the same length; the upper, blackish brown, the lower, white. The iris is greyish brown; the feet also greyish brown, with a tinge of yellow in spring, and somewhat less than one inch in height. As is the case with all Larks, the hinder claw, or spur, is longer than any of the others. The forehead and poll are rusty yellow, longitudinally spotted with blackish brown;

* *Oscines*. *Sauvögel*, BECH.

and when the bird is excited, the feathers occasionally erect themselves into a crest. The cheeks are greyish brown, and encircled by an indistinct whitish grey line, which passes between the eyes. The feathers of the back are blackish brown, with a broad margin; in some parts, pale reddish brown, and in others, whitish grey. The rump is rusty grey, striped with blackish brown; the chin, belly, and vent, yellowish white; the lower part of the neck, the breast, and the sides, dingy white, inclining to rust colour, and covered with fine blackish brown lines. The wing-coverts are greyish brown, the larger ones being edged with pale reddish brown. The pen feathers are dark brown, the five first being whitish, the next reddish in their margin; and those next to the body, which are larger than those in the centre, are grey; and they are all tipped with white. The tail feathers are blackish brown; those in the centre have on the inner plume a broad margin of rusty brown; those on the outside, of whitish grey; the two external feathers, on the whole of the outer and half of the inner plume, are white.

The female is somewhat smaller than the male; and is characterized by the more numerous and larger black spots on the back and breast, as well as by the generally lighter colour of the latter. The two following varieties are frequently seen in aviaries.

1. *The White Lark*, which is occasionally met with in a wild state, and is either pure white, or yellowish white.

2. *The Black Lark*, which is a smoky black all over the body, with a faint tinge of rust colour, and a margin of white on some of the plumage of the belly. I am not aware that this variety has ever been met with in a wild state, but it is not uncommon in aviaries, particularly if the Larks have been kept in a dark place. Unlike the White Lark, it resumes the natural colours of the species, after moulting.

Habitat.—The Field Lark is at home all over the world, and frequents meadows, ploughed fields, and plains. It is a bird of passage, arriving at the beginning of February, and leaving in large flocks in October. Of all birds of passage, it is the earliest in its arrival; which may probably be accounted for by the circumstance, that as it feeds not only on insects, but on grain, seeds, and various green shoots, &c., it can hardly fail to find nourishment, even if cold weather should unexpectedly set in.

In confinement, it is either allowed to range the room, betaking itself at night to some corner railed off for a sleeping-place, or is kept in a cage. If a good song be desired, the latter is the preferable method. The cage, the shape of which is of no consequence, should not be less than eighteen inches long, nine inches broad, and fifteen inches high. On the floor should be a drawer filled with river sand, with which this bird delights to dust itself; the top should be made of cloth, that it may not injure itself when flying upwards, as is often the case when it sings, or before it is accustomed to confinement. A second drawer may be appropriated for food and water; or the vessels may be affixed as usual to the side of the cage. If the Larks be allowed to range the room, particular attention to cleanliness is requisite, as they are very apt to entangle their feet in such substances as hair, wool, and flax. If care be not taken to clean their feet once or twice a day, lameness, or even the loss of one or more claws, is often the result.

Food.—In a wild state, the Skylark feeds on insects and their larvæ, ants' eggs, various kinds of small seeds, and, in autumn and spring, on oats, which it shells by beating them upon the ground. It is also fond of green food, and may be noticed picking up grains of sand, to aid in the process of digestion.

In confinement, those which are allowed to range the room, thrive on the universal pastes. Those kept in cages seem to prefer the second of these, or they may be fed on poppy seed, crushed hemp seed and oats, barley groats, malt, bread crumbs, varied with a little water-cress, lettuce, and cabbage. They are also fond of ants' eggs, and lean meat. This diet may be occasionally given to all Larks, whether caged or not, and will make them livelier, and improve their song. For those which are just caught, poppy seed and oats are the best food.

Breeding.—The Skylark builds its nest on the ground, and chiefly in fallow fields, or among the young corn. It is roughly put together, of dry grass and hair, and is usually placed in some slight hollow. The female lays twice a year, four or five whitish grey eggs, spotted with greyish brown. The period of incubation is fourteen days, and the young birds are often to be seen as early as the end of April. They are at first fed with insects, and begin to run about near the nest before they

are fledged. Before the first moulting, the upper part of their body is covered with white specks. The time for taking them out of the nest, is when the tail is about three quarters of an inch in length, when they are to be fed with bread and poppy seed soaked in milk; though ants' eggs, if they can be got, form a preferable diet. The young males may be distinguished by the yellow tinge of their plumage. The education of such as are to be taught to whistle, ought to commence before they are fully fledged; as they then begin to practise their own song; and the facility with which they adopt the song of other birds, render it necessary to hang the cage in a room by itself. I have had in my possession Larks which had acquired perfectly the songs of the Chaffinch and Nightingale.

Some females, when confined in the aviary, lay eggs independently of any connection with the male; but I have never succeeded in inducing them to sit. One, in the possession of a neighbour of mine, laid every year as many as from twenty to twenty-five eggs; but never, under any circumstances, could be made to sit upon them. The breeding season is earlier in the year, if the birds are kept in garden aviaries, when they have more fresh air, and better opportunities of exercise.

Diseases.—The Skylark is subject to all the diseases mentioned in the Introduction. A malady by which it is very frequently attacked, shows itself by the skin about the root of the beak becoming scabby and yellow. I know of no better remedy than an abundance of good food, especially the second universal paste, varied with ants' eggs, meal worms, and a little green food. The average duration of life in confinement is about eight years, though instances have been known in which it has lived for thirty years.

Mode of Taking.—It would occupy too much of our space to describe the numerous methods which are followed to entrap the Skylark. In all level countries, it may be caught during autumn in great numbers, by means of day and night nets. For the former, the nets are set up vertically like a wall, and the Larks driven to them either by poles, to which bunches of feathers are attached, or by ropes which are drawn along the surface of the ground. For the latter, a four-cornered net is drawn over such places as are likely to yield sport; as, for instance, stubble fields, &c. Another plan, by which, in spring, a

good singer may often be procured, is to take a Lark, whose wings have been tied, and to which a forked limed twig is attached, and let it go near the spot where the wished-for bird is heard. As soon as the decoy is seen by the latter, he is inflamed with jealousy, pounces down on his supposed rival, and is caught on the limed twig.

Attractive Qualities.—The song of the Skylark is exceedingly agreeable; and consists of several passages, all of which may be characterized as trills or shakes, on various notes of the scale, and only occasionally interrupted by the repetition of a loud whistle. It is a very docile bird; and even when old, often imitates the songs of birds which are hung in the same room with itself. Differences of capability may indeed be noticed in the Lark, as well as in other birds; the song of some is stronger and sweeter than that of others, and is unintermitting from December till the moulting season; while others, again, sing only between March and August. In a wild state, they generally cease to sing about St. James' Day; though there are exceptions to this rule, for they may sometimes be heard as late as Michaelmas.

ADDITIONAL.—This, as it is the most common, is also perhaps the most universally admired of all our native songsters. With us it is not a migratory bird, and its cheerful strains may be frequently heard quite late into the winter; generally, however, in severe weather, the Larks gather into flocks, and seeking the lower and more sheltered grounds, are mute, or nearly so. They congregate about the ricks in the fields and farm-yards, and help themselves plentifully to the hoarded grain. They are very commonly in good condition, and well worth the attention of the fowler. MUDIE gives an animated description of the Field Lark, as he calls it, and dwells particularly upon its beautiful mode of ascending and descending, and the agreement there is between the song and the flight of the bird.

MR. MAIN, in the *Magazine of Natural History*, observes, that "no bird sings with more method: there is an overture performed, *vivace crescendo*, while the singer ascends; when at the full height, the song becomes *moderato*, and distinctly divided into short passages, each repeated three or four times over, like a *fantasia*, in the same key and tune. If there be any wind, he rises perpendicularly by bounds, and afterwards poises himself with breast opposed to it. If calm, he ascends in spiral circles; in horizontal circles during the principal part of his song, and zigzag downwards during the performance of the *finale*. Some-

times, after descending about half way, he ceases to sing, and drops with the velocity of an arrow to the ground. Those acquainted with the song of the Skylark, can tell, without looking at them, whether the birds be ascending or stationary in the air, or on their descent; so different is the style of the song in each case. In the first, there is an expression of ardent impatience; in the second, an *andante* composure, in which rests of a bar at a time frequently occur; and in the last, a graduated sinking of the strains, often touching the subdominant before the final close. The time and number of the notes often correspond with the vibration of the wings; and though they sometimes sing while on the ground, as they are seen to do in cages, their whole frame seems to be agitated by their musical efforts."

The strong attachment of this species to their young has been the subject of remark by many naturalists; MR. BLYTH records, that "some mowers actually shaved off the upper part of a nest of the Skylark without injuring the female, which was sitting on her young; still she did not fly away, and the mowers levelled the grass all around her, without her taking further notice of their proceedings. A young friend of mine, son of the owner of the crop, witnessed this; and about an hour afterwards went to see if she was safe, when, to his great surprise, he found that she had actually constructed a dome of dry grass over the nest during the interval, leaving an aperture on one side for ingress and egress, thus endeavouring to secure a continuance of the shelter previously supplied by the long grass." Two or three instances are recorded of the Skylark moving its eggs under the fear of impending danger; and MR. JESSE, in the fourth edition of his *Gleanings*, speaks of the attempted removal of a young bird of this species to a place of safety by its parent, which, however, had not sufficient strength for the purpose, but was obliged to drop the fledgeling from a height of about thirty feet, so that it was killed by the fall.

YARRELL observes, that "Skylarks constantly dust themselves, appearing to take great pleasure in the operation, shuffling and rubbing themselves along the ground, setting up their feathers, and, by a peculiar action of the legs and wings, throwing the smaller and looser portion of the soil over every part of their bodies. This is supposed to be done in order to rid themselves of small parasitic insects." This author also says, "that during the time of producing the eggs, the female has occasionally been heard to sing with a power and variety of tone equal to the voice of her mate. The male Skylark, though at other times timid, is, while the female is sitting, bold and pugnacious; driving every other bird away that ventures too near his charge, both watching and feeding her with unceasing solicitude."

To no bird, except the Nightingale, have the English poets paid such homage as to the Skylark ; from Chaucer downwards, there is scarcely one of them who has not repaid the ecstatic music of that "Bard of the blushing dawn," with a strain as full of gladness and melody ; and not from the poets only has it received these tributes of admiration : grave divines, such as JEREMY TAYLOR and BISHOP HALL, have made it the theme of their high discourse ; the former says that "it did rise and sing as if it had learned music and motion from an angel." We wish that the nature of our work permitted us to quote a few of the most beautiful meeds of song offered to this most blithesome of songsters. As it is, we must be content with one only, and it shall be WORDSWORTH'S :—

"Ethereal minstrel ! pilgrim of the sky !
 Dost thou despise the earth, where cares abound ?
 Or, while thy wings aspire, are heart and eye
 Both with thy nest, upon the dewy ground ?
 Thy nest, which thou canst drop into at will,
 Those quivering wings composed, that music still.
 To the last point of vision, and beyond,
 Mount, daring warbler ! That love-prompted strain
 ("Twixt thee and thine a never-failing bond),
 Thrills not the less the bosom of the plain !
 Yet might'st thou seem, proud privilege, to sing
 All independent of the leafy spring.
 Leave to the Nightingale the shady wood—
 A privacy of glorious light is thine,
 Whence thou dost pour upon the world a flood
 Of harmony with rapture more divine.
 Type of the wise, who soar—but never roam,
 True to the kindred points of heaven and home."

127. THE CRESTED LARK.

Alauda Cristata, LIN. *Cochéris ou grosse Alouette Huppée*, BUF. *Die Hauben Lerche*, BECH.

Description.—This bird is about the size of the Skylark, though stouter, and resembles it also in plumage, except that it is somewhat lighter in colour. It is seven inches in length; the beak is lead coloured, tipped with horn brown; the iris dark brown; the feet one inch high, and yellowish ash grey. The head, cheeks, top of the neck, and upper part of the back, are reddish grey; all the feathers being blackish brown in the middle. From the nostrils to the ears, runs a reddish white stripe, hardly discernible over the eyes, but broader behind.

On the head stand from eight to ten long, pointed, blackish feathers, which when erected, form a handsome crest. The shoulders and middle of the back are light grey, spotted with dark brown; the rump feathers a pale rusty yellow; the chin reddish white. The sides are light grey, with a few dark brown longitudinal stripes; the under part of the body is a dirty reddish white; the neck and top of the breast being covered with three-cornered black spots. The wing coverts, and the hindmost pen feathers, are dark brown, edged with light grey; the other pen feathers dark brown, bordered with rusty red. The under wing coverts and pen feathers are a beautiful red rust colour, which in old birds changes into purple. The tail feathers are black; the two centre ones somewhat lighter in colour, and bordered with reddish grey; the two outermost, tipped and edged on the outer plume with rusty yellow.

In the female the crest is not so high, and the black spots on the breast are rounder and more numerous.

Habitat.—The Crested Lark is seen in Central Germany only in the autumn and winter, and then in towns and villages, along the high roads, near dunghills, stables and barns—in company with Sparrows and Yellowhammers. It is properly a native of North Germany, Denmark, Sweden, Russia, France, and Italy. In summer, it frequents the thickets and bushes of the cultivated land, the paths of woods, and near villages which lie high and retired. It is a bird of passage, migrating in October.

In confinement it may either be allowed to range about, or be placed in a cage similar to that prescribed for the Skylark. I know no bird in which the feathers grow so fast, as the operation of clipping the wings has to be repeated every three or four weeks.

Food.—In a wild state the Crested Lark lives on insects, small seeds of various kinds, and oats. In captivity it may be fed like the Skylark, but is less delicate, and has been known to live twelve years.

Breeding.—It builds its nest on the ground, under dry bushes, or clods, or in gardens, under the vegetables, and even on clay walls, and thatched roofs. It lays four or five eggs, which are whitish grey, clouded with rust colour, and dark brown on the upper edge. Before the first moulting, the plu-

image of the young is a mottled white. If taken from the nest to be reared when half fledged, they learn whatever is whistled to them, either by a teacher or by other birds.

Diseases.—These are the same as in other Larks; their death is often caused by parasitic insects. I may here introduce a fact, which seems to show that there is a difference of natural constitution even between birds of the same species. I possess two male Crested Larks, one of which destroys immediately every insect which appears upon him; while the other—a good singer, a beautiful feeder, and, during the four years he was in my possession, a healthy bird—was covered with these little animals to the tip of every feather.

Mode of Taking.—In winter, if a place which they are observed to frequent be cleared of snow, and limed twigs, nets, or even a sieve be conveniently arranged, baited with oats or poppy seed, these birds may be caught without difficulty.

Attractive Qualities.—The song of the Crested Lark is exceedingly agreeable and various, though, in my opinion, not so beautiful as that of the Skylark, of which, and the song of the Linnet, it seems to be compounded. It sings from February to August, by night as well as by day. It is a very docile bird, and has not the tottering gait of the Skylark, but traverses the room in a rapid decisive manner, making very impressive motions with its crest. It is a very quarrelsome bird, but has the peculiarity of continuing to sing while it fights.

ADDITIONAL.—Only two or three specimens of the bird are recorded to have been taken in this country. One of these is mentioned in the *Dublin Penny Journal*, of Feb. 27, 1836, by a correspondent, who signs himself W. R., who shot the bird near Tury ; another is described by MR. YARRELL, subsequently killed in Sussex. “This species,” says MACGILLIVRAY, “is very like the common Lark, but with the bill stronger, and distinct decumbent, erectile crest. It is found in most European countries, from Scandinavia to the Mediterranean, as well as North Africa, Egypt, and Anatolia.”

128. THE WOODLARK.

Alauda Arborea, LIN. *Alouette des Bois ou Cujelier*, BUF. *Die Waldlerche*, BECH.

Description.—The Woodlark is scarcely two-thirds of the size of the Skylark, being only six inches in length, but it bears

a striking resemblance to that bird in form and habits. The upper mandible of the beak is black, the lower brown, and both inclining to flesh colour at the tip; the feet are flesh-coloured, and three quarters of an inch in height. The top of the head is reddish brown, marked with four blackish brown streaks; and the plumage consists of long straight feathers, which, when the bird is excited, erect themselves into a crest. The base of this crest is surrounded by a whitish grey stripe, which passes from one eye to the other. The temples are brown; the nape of the neck, and upper part of the back, are reddish brown, with blackish brown spots; the lower part of the beak greyish brown. The throat and breast are yellowish white, spotted with blackish brown; the rest of the lower part of the body, yellowish white. The wing coverts are dark brown, edged with pale reddish brown; and there is a white spot on the shoulder, on the articulation of the wing, and on each of the four first feathers. The pen feathers are dark brown, edged with yellowish white on the lesser plume. The tail feathers are broad and blackish brown; the first and second are tipped with white, and on each is a reddish white wedge-shaped spot; while the two in the centre, as well as the long upper coverts, which reach almost to the end of the tail, are entirely greyish brown.

The female is a handsomer bird; the ground colour of her plumage is lighter, and the marks upon it darker, while the breast is more thickly spotted, and the white line round the crest more distinct. It may be remarked, that in all species of Larks, those in which the ground colour of the plumage is more decidedly white, and the spots more numerous, are generally females.

Habitat.—The Woodlark is found in all the more temperate countries of Europe, and in summer may be noticed in such woods of coniferous and other trees as are occasionally broken by meadows and fields. Except in the breeding season, it flies in flocks of from ten to twelve. It is a bird of passage, taking its departure in October, and returning in the beginning of March.

In confinement, the Woodlark sings better when allowed to range the room than when kept in a cage. In any case it ought to be plentifully supplied with river sand, both for dusting, and to aid digestion.

Food.—In summer the Woodlark feeds on all kinds of insects; in autumn, on various seeds, *e.g.* poppy, rape, and linseed, millet, oats, &c. In spring, when insects and grubs are not to be procured, it subsists upon green food.

When confined, it may be fed on the universal paste, but, as it is a more delicate bird than either of the two last described, it is well to introduce a little variety into its diet. For this purpose, poppy seed, oats, crushed hemp seed, sweet curds, dry and fresh ants' eggs, bullock's heart boiled and grated, malt, meal-worms, &c., may be occasionally given to it in small quantities. When first taken, the food which seems to tempt its appetite the soonest is poppy seed, oats, and ants' eggs.

Breeding.—The Woodlark builds its nest among the heath, under juniper bushes, in the long grass of preserves, or hedge sides in the neighbourhood of woods. It is constructed of dry grass stalks, interwoven with moss, wool, and hair, and generally contains four or five eggs, spotted with whitish grey and violet brown. The young birds, when taken from the nest, may be reared on ants' eggs, and bread soaked in milk; or if the parents be also taken, they will feed their brood with this food. They easily learn to imitate the songs of birds which are confined in the same room; but to me this artificial song is not so agreeable as their natural warbling.

Diseases.—This bird is liable to all the diseases mentioned in the Introduction, but is especially subject to a malady which makes its claws drop off. The best prevention of this is a strict attention to cleanliness, particularly to the removal of hairs, which cut into the flesh. It rarely lives more than four years, and generally dies of a broken leg, a peculiarity which I have remarked in no other bird.

Mode of Taking.—The Woodlark may be taken by putting limed twigs on the nest, or if this method be rejected as too cruel, the use of the night net in autumn is often very successful. During snow-storms, in spring, they may be caught with limed twigs or a net, in places cleared from, or not yet covered with snow. A good decoy will at the same time of the year lure them to spots either in the furrows which have been set with limed twigs, or within reach of the clap net. Like the Chaffinch, they may also be caught by a decoy, in which the wings are tied, and which has a forked limed twig attached to it, as before described. One advantage of this method is, that the captive is always a male.

Attractive Qualities.—The Woodlark not only excels all other Larks in the beauty of its song, but, in my opinion, surpasses, in this respect, all German birds whatever, except the Chaffinch and the Nightingale. Its tones are flute-like, and the varying phrases of its song have all a melancholy and tender expression. It sings either perched on the top of a tree, or flies upwards almost beyond the reach of sight, and remains poised on its outstretched wings, often warbling for an hour together. In confinement it always sings on its perch. The period during which it sings is, in a wild state, from March to July ; in confinement, from February to August. The female also sings, as is the case with all Larks, but in a more broken and interrupted strain. Some Woodlarks, which, however, are often the best singers, are obstinate and whimsical, and will not sing if any body be in the room ; it is therefore best to hang them in a cage outside the window. Its abrupt gait, and the curious manner in which it raises the feathers of the head and neck when walking, make the Woodlark an amusing inmate of the aviary.

ADDITIONAL.—The following is a portion of MUDIE's account of this sweet and plaintive songster :—"The Woodlark, though pretty generally distributed over the British islands, is by no means so common a bird as the Skylark. It is found on the borders of woods in wild places, and is not so much a bird of the cultivated fields as the other. Indeed, it is altogether of more solitary habits ; for while Skylarks congregate in flocks of many thousands, it is rare to see a dozen of Woodlarks at the same time ; and even in the small numbers that do appear in the winter, they are not found far from those wild localities in which they breed.

"That Woodlarks are not so numerous in proportion to their eggs as the other species, may be accounted for, partly from the inclement season, and partly from the more barren places in which they breed. Their breeding-time varies considerably in different parts of the country ; but in all situations it is as early as the weather will admit. And thus, on the high grounds, on the skirts of the Grampians especially, the nests are liable to be destroyed by those storms of sleet or snow, which set in sometimes as late as the middle of May, or even the beginning of June."

At the close of autumn these birds congregate in small flocks in the open fields, seeking food ; then it is that their melodious warble is no longer heard, as they utter instead a low melancholy

cry resembling the syllables *lu, lu*; hence CUVIER has applied to this bird the term *Alauda lulu*. If the season be mild, however, they continue their sweet song far into the autumn. BOLTON tells us, that some bird-fanciers prefer the song of this bird to that of the Nightingale, with which it is said sometimes to contend for superiority, invading even those hours which are generally considered sacred to the queen of feathered vocalists.

“What time the timorous hare trips forth to feed,
When the scar’d owl skims round the grassy mead ;
Then high in air, and poised upon his wings,
Unseen the soft enamoured Woodlark sings.”

BLYTH says, “in hot summer nights Woodlarks soar to a prodigious height, and hang singing in the air.” It has been a matter of dispute whether the term Woodwell, or Woodwale, used by some old authors, refers to this bird, or to a species of Thrush. In the ballad of *Robin Hood* we find it said—

“The Woodwele sung, and would not cease,
Sitting upon the spray,
So loud, he waken’d Robin Hood,
In the greenwood where he lay.”

129. THE SHORELARK.

Alauda Alpestris, LIN. *Alouette de Virginie, ou Housse-col noir*, BUF.
Die Berglerehe, BECH.

Description.—The Shorelark is seven inches in length, and a somewhat larger bird than the Skylark. The plumage on the upper part of the body is similar in colour, but the throat and lower part of the neck are light yellow, and, as well as the breast, traversed by a black stripe in the form of a horseshoe. The north of Europe is the home of the Shorelark, but in winter it may be seen in various parts of Germany, seeking in the horse-dung for grains of corn. It is often captured on the southern side of the Thuringian Forest, when returning home, especially in a snowy spring, with limed twigs and nets. It is, however, often so emaciated, as not to be able to eat the food offered it. It may be treated in all respects like the other species of Larks.

ADDITIONAL.—This bird is sometimes called the Horned Lark; its claim to be admitted into the British Fauna rests upon some three or four specimens, one obtained in Norfolk, another in Lincolnshire, and a pair in Kent; the male only of which, being

the more attractive bird, was preserved. This species appears to inhabit the northern parts of Europe, Asia, and America, being more plentiful in the latter continent than elsewhere: it has been described by WILSON, RICHARDSON, and AUDUBON, the latter of whom says it is seldom found west of the Alleghany mountains.

180. THE TITLARK.

Alauda Trivialis, LIN. *Alouette Pipi*, BUF. *Der Baumpieper oder Die Spitzlerche*, BECH.

Description.—This and the three following birds, though usually classed with the Larks, are entitled to this classification only by the colour of their plumage, and by the fact, that two of them possess a long spur. They are generally slighter in make; and in the shape of the beak, and the characteristic movement of the tail, rather resemble the Wagtails. In a wild state their food consists wholly of insects. They have two light coloured stripes upon the wings; a similar stripe passes above the eyes, and the throat is free from spots. They have all a mournful piping call, and, unlike the Larks, bathe in water, instead of sand. I consider them to be a link between the Wagtails (*Motacilla*) and the Larks (*Alauda*), and to form a class which I call Pipits (*Anthus*).

The Titlark is the smallest of all German Larks, whether properly so called or not, being only five inches and a half in length, of which the tail measures two inches and a half. The beak is very pointed; the upper mandible blackish brown, the lower whitish; the feet ten lines in height, and, as well as the claws, a pale flesh colour. The spur, or hinder claw, is crooked. The head is rather long, and, with the nape of the neck, back, rump, and sides, olive brown, spotted with black; the lower part of the body, as far as the belly, rusty yellow, covered with black longitudinal spots, which begin at the corner of the beak, and extend over the breast. The belly is white; the smaller wing-coverts olive brown; the two larger rows blackish, the upper having a margin of white, the lower of reddish white, which produce two white stripes on the wings. The pen feathers are dark brown, edged with olive grey; the tail thin, and somewhat forked. All the feathers of the tail are pointed, and dark brown; the external ones being white half way down the outer plume, and the next

having a small wedge-shaped white speck near the tip. The under side of the wings is grey.

The female is hardly distinguishable from the male, except that the throat, neck, and breast, are not so bright a yellow, but have rather a whitish tinge; that the white spot on the second tail feather is smaller, and the two stripes on the wings whiter. The males of one year old, also, are not so yellow on the lower part of the body.

Habitat.—The Titlark inhabits the whole of Europe, except the extreme north, and frequently breeds in the mountainous and forest districts of Germany. It chiefly frequents the skirts of woods, or those parts which have been cleared of trees, as well as the neighbouring gardens and meadows. In August, it may be seen in small flocks in the cabbage fields, or on the house-tops; and in September in the oat fields. On this account, it is often caught about the beginning of October, in the night nets used for the capture of the Skylark. It is a bird of passage, returning about the end of March, when, if the weather be at all cold, it may generally be seen in the ploughed fields, and near warm springs. The Titlark has one peculiarity, which is shared by very few birds; namely, that its call in the pairing season is entirely distinct from any note which it utters at other times. It usually perches upon the ground, and utters its cry of *Giek, giek!* while at the pairing time, or when it has young, and is near its nest, its call is a mournful *Tzip, tzip!* If this cry be heard from a bird perched on a tree, it is a sure sign that the nest is not far off; and the bird will be found to have its bill full of insects, redoubling its cries as the stranger approaches its nest. At this time, it seldom or never utters the call *Giek, giek!*

In my collection, the Titlark is allowed to range the room with the other birds; but if any amateur should think it worthy of a cage, its life will be lengthened by this means, and its song improved. The cage should be an ordinary Lark's cage, furnished with two perches, upon which the bird is fond of placing itself.

Food.—In a wild state the Titlark feeds principally on flies, grasshoppers, beetles, caterpillars, and small butterflies. In the aviary it requires a varied diet, and besides the usual paste, should occasionally have the Nightingale's paste, crushed hemp seed, sweet curds, or meal worms. The chief difficulty

in keeping the Titlark is to accustom it, when newly caught, to the food of the aviary; for which purpose it should be at first fed with meal worms, grasshoppers from which the legs have been taken off, and ants' eggs, with which the universal paste may be mixed, in gradually larger quantities. The Titlark does not sand itself like other Larks, but takes up water with its bill, with which it sprinkles its body.

Breeding.—The Titlark builds its nest on the ground, in gardens, meadows, or open spaces of the forest, among the long grass. It is carelessly constructed of dry grass stalks, lined inside with finer stalks, and horse and cow hair. The female lays twice a year, four or five grey eggs, mottled with brown. The young—which, on account of the numerous enemies to whose attack they are exposed, leave the nest as soon as fledged—may be reared on ants' eggs, and bread soaked in milk, mixed with a little poppy seed. They are very docile, and learn to imitate, though not very perfectly, the notes of such birds as are kept in the same room, particularly of the Canary.

Diseases.—The Titlark is subject to the usual diseases of birds, as well as to the falling off of the feathers, at other seasons than that of moult. If at this period it be not fed with good and nourishing food—as, for example, meal worms and ants' eggs—it frequently dies of atrophy. The average duration of its life is six years.

Mode of Taking.—The surest, though an inhuman method of catching the Titlark, is to put limed twigs on the nest. In March a male bird may often be obtained by help of a decoy, to which a limed twig is attached, in the manner already more than once described. In autumn it may be taken with the night net, if the places in the oat-stubble which they frequent, be noticed; though at this season of the year it is difficult to distinguish between the sexes. Up to September, the Titlark may be also caught in the water-trap.

Attractive Qualities.—The song of this bird, though consisting only of three passages, ornamented with trills and shakes, is pleasant. It either sings perched on the top of a tree, or ascending perpendicularly in the air, where it sustains itself for a few moments, and then returns to its former place, repeating in its descent the syllables *Tzia, tzia, tzia!* In a wild state it sings from the end of March to July; in confinement, from February to the same period. It is an amusing bird,

attracting attention by its slow and thoughtful gait, the constant motions of its tail, and its attention to its own neatness and cleanliness.

ADDITIONAL.—With us this bird is variously known as the Titlark, Tilting, Meadow-Pipit, and Moss-Cheeper ; it is a common and generally distributed species, being as often met with in the interior of the country, as on the coasts, and frequenting principally wet meadows, commons, and pasture lands. “ In winter,” says MACGILLIVRAY, “ most of the individuals betake themselves to the lower grounds, many to the sea-shore, where they mingle with the Rock-Pipits. During snow, they search the margins of streams and lakes, frequent unfrozen marshes, and even appear in the stack-yards. Their food consists of insects, *pupæ*, *larvæ*, and occasionally small seeds, along with which they pick up particles of gravel, and frequently, in the lower districts, small bits of coal and other dark-coloured substances. When searching for it, they walk by short alternate steps, keeping the body close to the ground, in the manner of the Skylark, and when alarmed, either crouch, or spring up, uttering a repetition of their ordinary cheeping note, and fly off to a distance. You may see them occasionally on a bush or tree, frequently on a wall, a stone, or a rock ; but they are essentially ground birds ; and while they are employed all day in traversing the meadows and pastures, they repose at night among the dry grass of the moors and hills, or under the shelter of tufts of heath, furze, or other small shrubs. Their ordinary flight is wavering and desultory, but when they fly with speed, in an undulating line. They are not generally very shy, so that they are easily shot, but at the same time they are evidently watchful and suspicious, and fly off when one approaches nearer than thirty yards.”

This is the bird in whose nest, it is said, the Cuckoo most frequently deposits its egg, and in reference to which a remarkable instance of sagacity is mentioned by THOMPSON, in his papers on the *Natural History of Ireland*. A nest of this bird having been discovered by some truant boys, on the side of a drain, where, as well as on the ground in fields, it was frequently known to build, was by them deprived of the grassy covering which concealed it. On visiting the spot a day after this occurrence, he found a quantity of withered grass laid regularly across the nest ; this he removed, and out flew the bird. On the day after, he repeated his visit, and again found the grass similarly placed, and discovered a small aperture beneath, by which egress was afforded to the bird, that had evidently herself thus endeavoured to screen her nest from observation.

131. THE FIELDLARK.

Alauda campestris, LIN. *La Spiolette*, BUF. *Der Brachpieper*, BECH.

Description.—This bird is six inches and a half in length, smaller and more slender than the Skylark. It resembles the Crested Lark in colour, and the Titlark in form. The beak is thick and long; the upper part of the body dark grey, with blackish spots. There is a white stripe over the eyes, and the breast, which is yellowish white, is streaked with blackish grey lines. The tail is dark brown, having the two outermost feathers white on the outside. The feet are a pale flesh-colour; the nail of the hind claw is strong and curved.

The Fieldlark may be met with in summer in woody marshes; in autumn, on the edges of fields, meadows, and high roads; and may be caught with the night net. It does not sing, but cries constantly, while making its revolutions in the air, *Tsirru!* and *Datsida!* It is a bird of passage, departing in September, and returning in April. It must be fed and treated like the Titlark; but is a more delicate bird.

ADDITIONAL.—BECHSTEIN, it will be seen, has placed this bird with the Pipits, but it does not appear at all clearly what British species corresponds with the slight description here given. MACGILLIVRAY includes in his *Anthus*, or *Pipit Genus*, five species, two of which appear to be identical with these just described; the other three, which he calls *Anthus Obscurus*, the Dusky or Shore Pipit; *A. Spinoletta*, the Redbreasted Pipit; and *A. Recardi*, Richard's Pipit, scarcely agree, in their distinctive characteristics, with either of the species given by the German naturalist, who claims for his Water Pipit, presently described, the LINNÆAN title *Alauda Spinoletta*. In point of size it best corresponds with the *Anthus Aquaticus*, variously called the Rock or Shore Pipit, Rock, Sea, or Dusky Lark, which MUDIE describes as inhabiting the sea-shores, and finding the principal part of its food at, and within, the high water mark. “In manner its song in spring, and its chirp at all times, bear a very close resemblance to those of the Meadow Pipit. It runs with great ease along the sand, picking up its food; and when alarmed, it hops onward with a bouncing flight. The nest is formed of bents, or other plants, growing near the sea, and lined with finer fibres, or with hair. The eggs are not more than five, yellowish grey, with reddish brown spots, especially at the thick ends. There are two broods or more in the course of the year.”

132. THE MEADOW LARK.

Alauda Pratensis, LIN. *Alouette des pres ou Farlouse*, BUR. *Der Wiesenpeiper, oder die Wiesenlerche*, BECH.

Description.—This bird, which measures five inches and a half in length, is very like the Titlark; though it may be easily and certainly distinguished from it by the straightness of its spur or hinder claw. Besides this, it is generally smaller; the feet redder, the head larger, and the beak, which is only two inches in length, thinner and not so long. The upper part of the body is olive green, spotted with blackish brown; the rump reddish greyish green, mottled with grey. A distinct whitish yellow stripe passes above the eyes, and another of a similar colour encircles the cheeks. The under part of the body is dirty white, reddish yellow on the breast, and tinged on the sides of the breast and belly with greenish yellow. The breast is covered with oval black spots, and the upper part of the belly with triangular specks of the same colour. The wings are traversed by a double white stripe; the pen feathers are dark brown; the feathers of the tail, which is somewhat forked, blackish. The external feathers are, however, half white, and the others are marked by a wedge-shaped white spot.

The plumage of the female is generally lighter in colour.

Habitat.—The Meadow Lark frequents lakes, rivers, marshes, and damp meadows. In September it may be seen in great numbers on the meadows and among the stubble fields; while in October, it collects in large flocks, and takes its departure. It is almost the last bird of passage to leave us, as its shrill cry, *Bis, bis!* may often be heard in the meadows, even in November and December. It returns in March.

When in confinement, it may either be allowed to range the room, or be kept in a Lark's cage, which, as in the case of the Titlark, and for the same reason, should be furnished with a couple of perches.

Food.—In a wild state the Meadow Lark feeds on insects, especially aquatic species. In the aviary it is the tenderest of its kind, and can be inured to the universal paste only with great difficulty. The best diet for this purpose is composed of ants' eggs and chopped meal worms, mixed with soaked bread and meal. As it always requires both ants' eggs and meal-

worms, the best plan is to keep it in a cage, and feed it on the diet prescribed for the Nightingale.

Breeding, and Diseases.—This bird builds its nest in marshes and damp meadows. The principal diseases to which it is liable are atrophy and diarrhoea.

Mode of Taking.—The Meadow Lark may sometimes be taken with other Larks in the night net, or by setting with limed twigs the marshy places which it is observed to frequent. In snowy weather the same result may be attained, by setting limed twigs, baited with meal worms, on some spot cleared from snow.

Attractive Qualities.—This is a very pretty Cage-bird. Its song is full, clear, and melodious ; and, except that it is more various, and is better executed, resembles that of the Titlark. There are also passages in it which are like the warbling of the Canary.

ADDITIONAL.—With us this bird is sometimes called the Tree Pipit, or Short-heeled Field Lark ; it is frequently confounded with the preceding species, which it very closely resembles ; it is of much less frequent occurrence in Britain, where, according to MACGILLIVRAY, it does not remain during the winter, nor does it “frequent the heaths and open grassy pastures, which are the favourite places of abode of the Meadow Pipit in summer ; but is found in the cultivated parts, in the vicinity of woods and thickets. Its song, which is of the same lively character, but mellower, more modulated, and longer continued, is given out during the descent from an elevation of from twenty to thirty yards, during which it flutters with expanded wings and tail. Sometimes, also, it sings while perched on a tree, and more frequently while descending from one to the ground.

“The nest, which is placed among the grass in a wood, or near its margin, is similar to that of the Meadow Pipit, being composed of dry grass, lined with finer blades, and having the interior of hair. Mr. WEIR, of West Lothian, who seems to have paid close attention to the habits of both species, writes, ‘that while the eggs of the Meadow Pipit are closely freckled sometimes with dark, and sometimes with light brown, those of the Tree Pipit are blotched with deep crimson purple, and the ground colour of them partakes of a tint of the same, but much paler.’ ”

133. THE WATER LARK.

Alauda Spinoletta, LIN. Der Wasserpieper, BECH.

Description.—This, which is the largest of the Larks, is seven inches in length, of which the tail measures three inches, and the beak seven lines. From tip to tip of the expanded wings is eleven inches and a half. The beak has a sharp ridge on the top, and in summer is horn-blue, in winter brown, edged with yellow. The feet are brown, and unwieldy; the spur long and strong. The upper part of the body is olive green, mottled with a similar tinge of grey; an indistinct white stripe passes between the eyes; and the under part of the body is greyish white, covered on the throat and breast with triangular dark brown spots. The wings are blackish grey, with two white stripes; the tail strong, somewhat forked, and blackish; the outermost feather having a wedge-shaped white spot, and the second being tipped with dingy white.

The female is a darker grey on the upper part of the body, and on the under part is more thickly spotted.

Habitat.—I have never seen this bird except in Franconia and Thuringia, during its passage at the end of October and beginning of November. There it may be seen in moist places, and especially near springs; and in mild winters it occasionally remains till March.

It is easily tamed, and may either be allowed to range the room, or may be confined in a Lark's cage with perches.

Food.—In a wild state it feeds, like the Wagtail, on aquatic insects. When confined, it may be easily induced to eat the universal paste by mixing with it a meal-worm or two; it will also take poppy and crushed hemp seed. It is fond of bathing.

Mode of Taking.—A spot near the water should be cleared from snow, and set with limed twigs, baited with meal worms. If the bird be gently driven towards it, success is certain.

Attractive Qualities.—The Water Lark, which is a favourite bird with me, usually sits still upon its perch, but moves its tail backwards and forwards almost as fast as a Strand Snipe. Its song resembles that of a Siskin or Swallow, or is occasionally like the wetting of a scythe. Its call, which is shrill and harsh, is *Hish! hish!* It is a very cleanly bird.





STARLING

134. THE STARLING.

Sturnus vulgaris, LIN. *Etourenau*, BUF. *Der Gemeine Staar*, BECH.

Description.—The Starling resembles the Redwing Thrush in size and shape, being eight inches and a half in length, of which the tail measures two inches and a half. The beak is one inch long, awl-shaped, angular, somewhat flattish, and a little blunt. It is a pale yellow, tipped with brown, and in winter blackish-blue. The iris is nut-brown; the feet one inch in height, and dark flesh-colour. The whole body is blackish, having a bright purple tinge half way down the back and breast, with a bright green lustre on the rest of the body, and on the wing-coverts. The pen and tail feathers are black, speckled with grey, and, together with all the coverts, edged with light rust colour. The feathers of the head and nape of the neck are tipped with reddish white; those on the back with light rust colour, and on the outer part of the body with white. Hence the general appearance of the bird is speckled.

In the female the beak is rather blackish brown than yellow; the light-coloured spots, especially on the head, neck, and breast are larger, and the edges of the wing feathers broader, which altogether give the bird a lighter and more mottled appearance. Old males have hardly any white spots on the forehead, cheeks, throat, and belly.

There are several varieties of this bird: as, for instance, White, Mottled, White-headed, and Grey Starlings, as well as such as are white all over the body and black on the head.

Habitat.—The Starling inhabits all parts of the Old World, and frequents woods and thickets which are at no great distance from meadows and ploughed fields. In October it departs southwards in large flights, and does not return till the beginning of March. In its migration it takes shelter by night among reeds and bullrushes, from which its shrill cry may often be heard to proceed.

This bird is usually allowed to range the room; and, indeed, the only reason for keeping it in a cage is that, though keeping itself clean, it makes the aviary very dirty with its fluid excrements. An appropriate cage, which may be of any desired form, ought not to be less than two feet long, and one foot and a half broad, as the Starling is a restless bird, and will injure its plumage, if not allowed ample space for exercise.

Food.—When wild, the Starling eats not only caterpillars, snails, grasshoppers, mole-crickets, and the insects which tease the pasturing cattle, but grapes, cherries, berries, and grain of all kinds, buck-wheat, millet, and hemp seed. Its chief food, however, consists of the small meadow grasshopper, which it eats also in the larva state.

In confinement it may be fed on the universal paste, meat, insects, bread, cheese, and, indeed, anything which is not sour. A wild bird soon becomes tame if fed with ants' eggs and meal worms, and is speedily as much at home as if reared in the aviary. There are, however, some few birds so obstinate as to die of hunger, sooner than eat in captivity. The Starling is exceedingly fond of bathing, and therefore requires a constant supply of fresh water.

Breeding.—The Starlings build in hollow trees, in dovecotes, under the roofs of houses, and in wooden boxes and earthen vessels, which are often hung on trees for their accommodation. The nest is carelessly built of dry leaves, grass stalks, and feathers, and is occupied by the same pair year after year, being cleaned out when they take possession. The female lays twice a year seven greenish grey eggs. Before the first moulting the young are not so much black as a smoky fawn colour, without spots, and their beak is dark brown. Young birds, when taken from the nest, may be reared on bread and milk, and will learn to whistle an air more perfectly, and in a clearer tone, than either the Bullfinch or the Linnet. Their memory is exceedingly good, as is shown by their retaining many and various passages without confusion or mistake. In the Voigtland the peasants treat the Starlings like domestic Pigeons: they take the young ones from the nest before they are fledged, and this induces the parent birds to breed three times a year. The last brood is, however, generally left, both to increase the stock, and not to discourage the old birds from returning to the same nest.

Instances have been known in which Starlings have built in the aviary, when provided with a box or pot in which to construct their nest.

Diseases.—I know of no diseases peculiar to this bird. It will live from ten to twelve years in confinement.

Mode of Taking.—In autumn the Starling is often taken among the reeds, in nets specially constructed for the purpose.

About July single birds may be caught by placing an osier fish basket, baited with cherries, among the reeds to which they resort at night. In Thuringia, it is considered the best time to take them when a snow shower occurs after their arrival in March. A place, near the marshes and ditches which they frequent, is cleared of snow, and set with limed twigs, baited with earth-worms. To this the birds will allow themselves to be driven, like poultry.

Attractive Qualities.—The Starling becomes exceedingly tame in confinement, and, in respect of docility and sagacity, deserves to be compared with the dog. It is always lively, understands and obeys every gesture and motion of those with whom it lives, and though tottering about with a sober step and stupid appearance, allows nothing to escape its notice. It learns, without having its tongue loosened, to repeat words, whistle airs (a power shared by the females also), and to imitate the voices of men and animals, and the song of birds. It is, however, very uncertain in this respect, as it not only soon forgets what it has learned, but mixes up old and new lessons together, so that entire solitude and silence is essential, if it is desired to teach one of these birds to go through its performance correctly. It is remarkable that this docility is not confined to the young, but is characteristic also of old birds, which have a peculiar harp-like song of their own. As, however, is the case with all birds, this docility is very various in different individuals, and I have one now in my possession which utters its natural song in the midst of all the birds in the aviary. The Starling sings throughout the year, with the exception of the moulting season.

ADDITIONAL.—The Stare, or Starling, is in this country a well-known bird ; it is the smallest of all our resident birds allied to the *Corvine*, or Crow tribe, and the most beautiful as well as the most harmless, never killing other feathered creatures, or destroying their eggs, although it has been accused of doing both, and suffered on that account much persecution. MACGILLIVRAY says, that “the Starling is generally distributed in Britain, but local. It is no where more common than in the northern and western isles of Scotland, where it breeds in caves, crevices of rocks, and holes in the turf.” This author, after giving an animated description of one of their breeding places, on the west coast of the Hebrides, thus continues :—“The places to which above

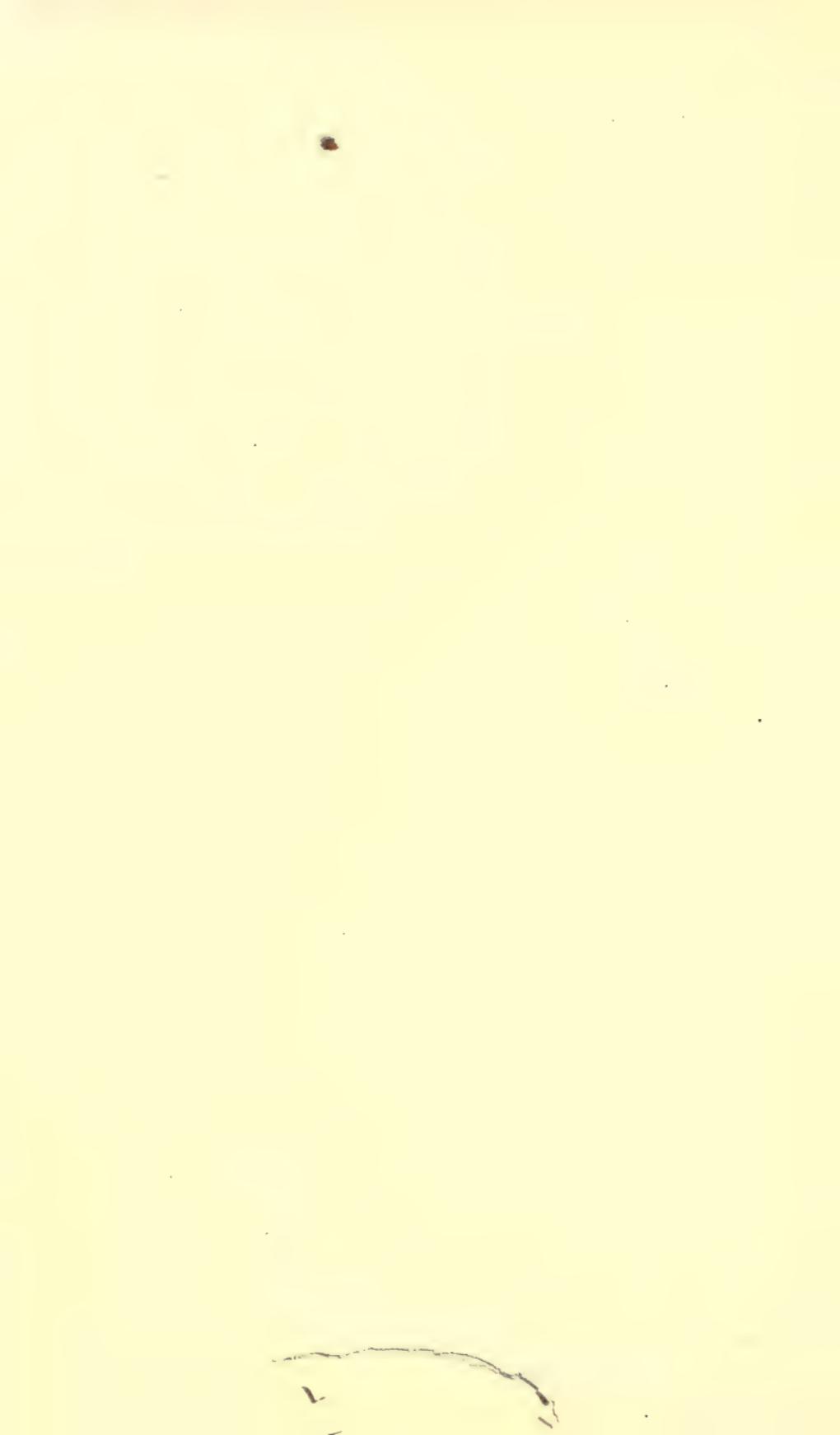
all they most frequently resort in summer and autumn, are the cow-folds, where the farm stock is enclosed at night, and there, before the cattle are let out, or at milking time, you may find large flocks busily employed in searching among the old and dried dung for larvæ and worms, keeping up an incessant low chatter, frequently perching for awhile on the cattle, and when satisfied, reposing on the low walls of the field, where you may shoot them by half dozens. In winter they frequent the corn yards along with Linnets, Buntings, Larks, and wild Pigeons, to obtain a few grains of oats, search the stubble grounds for seeds, pick up small testaceous mollusca from the pastures, and occasionally visit the shores to feed on marine worms. In spring they find a supply of food in the newly-turned fields or patches of ground; in summer and autumn, they are furnished with abundance of larvæ and worms, found chiefly under the dung of domestic animals, and they attack the corn in the same manner as the Sparrow, although this kind of food is apparently less agreeable to them than their more usual kind."

In STANLEY's *Familiar History of Birds*, will be found a good account of the habits of this interesting species. It has been asserted that the male Starling does not feed its young ones; MR. WEIR, however, asserts that this is a fallacy, and proves that it is so, from actual observation.

With regard to the vocal powers of this bird, MACGILLIVRAY says: "Almost all authors are agreed in reducing its natural notes to 'a harsh scream, and a chatter or twitter'; but I have certainly heard them enumerate what to me, who am more sentimental than musical, appeared to be a very pleasant little song. As a specimen of an accomplished Starling, I may here introduce one visited by MR. SYME. 'We went one morning with a friend, to see a collection of birds belonging to a gentleman in Antigua Street, Edinburgh, and among these were some very fine Starlings—one in particular, which cost five guineas. Breakfast was ready before we entered the room. When the bird was produced, it flew to its master's hand, and distinctly pronounced—'Good morning, Sir,—breakfast—breakfast.' It afterwards hopped to the table, examined every cup; and while thus employed, it occasionally repeated 'Breakfast—breakfast—bread and butter for Jack—pretty Jack—pretty Jack.'"

MR. WEIR gives a similar account of another individual. "Mr. Paton, carver and gilder, Horse Wynd, Edinburgh, had one a few years ago, which I have heard pronounce most distinctly the following sentences. When I entered the shop, he said to me, 'Come in, Sir, and take a seat—I see by your face that you are fond of the lasses—George, send for a coach and six for pretty







WATER OUZEL.

charlie—Be clever, George, I want it immediately ;' and many other sentences to the same purport."

135. THE WATER OUZEL.

Sturnus Cinclus, LIN. *Merle d'Eau*, BUF. *Der Wasserschwätzer*, BECH.

Description.—The Water Ouzel is about the size of the Starling ; but the head is more pointed, the body not so slight, and the wings and tail shorter. It is seven inches in length, of which the tail measures one inch and three quarters. The folded wings do not cover more than half an inch of the tail. The beak is eight lines in length, narrow, compressed at the sides, sharp pointed and black. The nostrils are small, and surrounded by a kind of skin. The iris is light brown ; the feet an inch in height, and blackish brown ; the head and nape of the neck are a dingy reddish brown ; the rest of the upper part of the body black, mottled with grey ; the pen and tail feathers blackish ; the throat half way down the breast pure white : the remainder of the breast dark brown. The female is lighter on the head and neck, and not so white on the breast.

Habitat.—The Water Ouzel frequents the banks of mountain streams, near which, as least liable to be entirely frozen over in winter, it remains throughout the year. In confinement it may either be allowed to run about the room, or be kept in a large Thrush cage.

Food.—When wild, it principally subsists on aquatic insects, though it eats also worms and small fish, for which it dives. In confinement it may be inured to one of the universal pastes by the judicious use of meal worms, flies, and ants' eggs.

Breeding.—The nest of the Water Ouzel, which is constructed of grass stalks, root fibres, and moss, is generally placed among stones by the side of a stream, in the timbers of a weir, or between the spokes of a disused water-wheel. The female lays five or six white eggs, and the young ones, which need not be taken from the nest till nearly fledged, may easily be reared on meal worms, ants' eggs, and bread soaked in milk.

Mode of Taking.—Every pair of these birds have a fixed station on some weir, stone, or bush, which overlooks a stream, and may be taken without difficulty by means of limed twigs judiciously placed, and baited with live meal worms.

Attractive Qualities.—The sonorous song of this bird is not

unpleasant, especially when heard in the open air, in the middle of winter.

ADDITIONAL.—The Water Ouzel, Water Crow, Water Peit, Black Water Bird, Ducker, and Dipper, are the various names by which this bird is known in Britain, where it is pretty generally distributed, being most plentiful in the north. “It frequents,” says MACGILLIVRAY, “running waters, perches on stones or on the banks, descends to the bottom in search of its food, which consists of mollusca and insects, has a rapid direct flight, and is of a rather solitary disposition. The nest, which is placed near the water, is of enormous size, arched over, but broader than high, with the aperture in front, and composed externally of moss, internally of grass, and lined with beech or oak leaves. The eggs, five or six, oval, rather pointed, pure white, about an inch in length, nine-twelfths in breadth. The young, when nearly fledged, on being disturbed, leave the nest and plunge into the water.”

Some controversy has arisen among naturalists on the power which this bird has been said to possess of walking underneath the water. According to BUFFON, M. HERBERT was the first to observe and record this extraordinary feat. WATERTON ridicules the notion; and BRODERIP, who seems to have weighed the evidence on both sides, agrees with MACGILLIVRAY in believing only that its power of submersion extends to the short interval of time necessary to the seizure of its food, and that with difficulty it remains under water sufficiently long for this. The sonorous song of this extraordinary bird startles the ear as it comes mingled with the hoarse tones of the torrent, or the rushing of the wintry waterfall, sometimes in the midst of a snow-storm. MR. RENNIE, who remarks that it is one of the few birds that are vocal so early in the year as the months of January and February, heard it on the 11th of the latter month—in hard frost, when the thermometer in the morning had been at 26°,—sing incessantly in a powerful and elegant style, with much variation in the notes, many of which were peculiar to itself, intermingled with a little of the piping of the Woodlark. The same author declares that the Dipper consumes a considerable quantity of fishes’ spawn, and especially of the *ova* of the salmon. BECHSTEIN alleges that this bird sings in the night. YARRELL, in his *British Birds*, gives an admirable cut of the domed nest, which in shape much resembles that of the Wren, than which, however, it is more broad and shallow.



136. THE BOHEMIAN, OR WAXEN CHATTERER.

Ampelis Garrulus, LIN. *Jaseur de Bohême*, BUR. *Der Gemeine Seidenschwanz*, BECH.

Description.—The Bohemian Chatterer is eight inches in length, and almost as large as the Redwing Thrush. The beak is short, black, straight, arched above, and broad at the root, so that the opening of the mouth is large. The iris is reddish brown; the feet black, and nearly one inch in height. The whole plumage of the bird is soft and silky, and the feathers on the top of the head are elongated, so as to form a crest. The head and upper part of the body are reddish ash colour, inclining to grey on the rump; and a black stripe passes from the nostrils over each eye to the back of the head. The chin is black; the forehead, as well as the vent, chestnut-brown. The breast and belly are a light purple brown; the smaller wing coverts are brown, the largest and most distant from the body black, tipped with white, which produces a white stripe on the wings. The pen-feathers are black; the third and fourth tipped with white, the five following with yellow, on the outer plume. Besides this, in many of their feathers the shafts end in a smooth, horny, oval tip of the colour of red sealing-wax. Of these the female has never more than five; the male sometimes as many as nine on each side. The tail is black, tipped with sulphur colour; and in very old males is sometimes provided with tips like those on the wings.

In the female, the black spot on the throat, and the sulphur-coloured tip of the tail, are smaller; and the wings are tipped with yellowish white.

Habitat.—These birds breed within the Arctic Circle, and visit Germany only in the winter, arriving in November, and departing in the beginning of April. In mild winters they do not come as far south as Thuringia; in severe ones, they seek a still warmer climate. In average seasons they sometimes remain with us throughout the year, and may then be seen in other parts of Germany also, as in Saxony, the Hartz Mountains, and Bohemia.

In confinement it is usually kept in a corner of the room, separated by a grating, which, however, must not be near the fire. A very slight degree of heat is sufficient to make it open its beak, and begin to gasp for air, a fact which proves that its summer abode must be in a very cold climate. If, for

cleanliness sake, it be kept in a cage, it should have one like that used for a Thrush, the floor of which must be daily strewed with fresh sand.

Food.—In spring, the Bohemian Chatterer feeds on various kinds of insects, particularly flies. In autumn and winter it eats berries of almost every kind, and, in case of need, the buds of the beech, maple, and different fruit trees.

In confinement, the universal pastes must be delicacies to it, as it is content with bran and water. It swallows everything voraciously, is very fond of wheaten bread, and eats everything that is offered it, as vegetables of different kinds, such as potatoes, cabbage, lettuce, and ripe fruit. It is fond of water, though it only sprinkles itself, and that not so plentifully as other birds.

Attractive Qualities.—The only recommendations possessed by this bird are its beauty, and, in some districts, its scarcity, for it is both stupid and lazy. In the aviary it does nothing but eat, and sit still upon its perch, and even when hunger drives it to make a journey across the room, its motions are so awkward, as to be positively unpleasant to see. It has no song, except a few low twittering notes, like those of the Redwing, though still more soft; and while singing, alternately erects and depresses its crest, and so squats in a heap, as to conceal all motion in the throat. This song, which the bystander might imagine to be produced with a painful effect on the part of the bird, continues throughout the year. If bad tempered, as is not unfrequently the case at the seed trough, it makes a snapping noise with its beak. It is easily tamed; and is perhaps the greatest eater of all birds with which I am acquainted, as it consumes every day almost its own weight of food. This it soon voids in a half digested state; and if fresh food be not speedily supplied, eats its own excrement. When juniper berries have been given it, I have known it do this three times in succession. A natural consequence of this greediness is, that its cage or grating requires a daily cleasing, without which, the stench proceeding from its excrement would be insupportable.

ADDITIONAL.—This bird is one with which British naturalists are but little acquainted. MACGILLIVRAY describes it as visiting this country accidentally, or at irregular periods, making its appearance generally in large flocks, and in winter, when it betakes

itself to the hedges and rowan trees, to feed on their berries. It has been met with frequently in Scotland, and yet at such irregular and often distant periods, that it must be considered a very rare bird even there. In England, if we except the northern counties, it is of still less frequent occurrence, although specimens have been obtained as far south as Devonshire and Cornwall. Its geographical range is vast; for it inhabits the north of Asia, is mentioned by M. TEMMINCK as occurring in Japan, and has been observed by DR. RICHARDSON and others in North America. With us it is generally shy, easily put to flight, and of active habits. It is said to feed not only on the berries of the ivy, rowan, whitethorn, and wild rose, but also on insects, which it pursues in the same manner as Shrikes and Flycatchers, although not with equal dexterity. It is usually named the Bohemian Chatterer, although a remarkably silent bird, and not more common in Bohemia than in many other parts of Germany. As the black patch on the throat is one of its principal distinctive characteristics, Black-throated is evidently a better specific name than Bohemian.

137. THE MISSEL THRUSH.

Turdus Viscivorus, LIN. *Le Draine*, BUF. *Die Mistel Drossel*, BECH.

Description.—This, the largest of our Thrushes, is eleven inches in length, of which the tail measures three inches and a half. The knife-shaped beak is one inch long; the upper mandible curved downwards at the point, and, as in all Thrushes, dark brown. The root of the lower mandible, and the opening of the throat, yellow. The iris is brown; the feet a dirty light yellow, and more than an inch in height. The upper parts of the head, neck, and body are greyish brown, with a reddish stripe on the lower part of the back and rump. The sides of the head and the throat are whitish yellow, as are the other parts of the body as far as the vent, though covered with black spots, three-cornered or oval, yet regularly distributed. The larger wing coverts are edged with reddish white; the pen feathers are greyish brown, bordered with a lighter shade of the same colour; the tail also is greyish brown, having the three extreme feathers tipped with white.

The plumage of the female is generally lighter; the root of the beak is not so yellow, and the under part of the body whiter.

Habitat.—The Missel Thrush is a native of all Europe, but more of the northern than the southern part. It principally

frequents mountainous countries, and is noticed to prefer pine to other woods. It is a bird of passage, though it does not leave Thuringia till the middle of December, and returns in February, as soon as the fine days begin. In the warm valleys of Franconia, it is seen throughout the winter. In confinement, a corner of the room partitioned off with a grating, or a cage of any shape, but at least three feet and a half long, and almost as high, must be assigned to it, as it is a large and wild bird, always in motion, and soon injuring its plumage. It is best to appropriate a separate apartment to this and other large Cage-birds, as their dung has a very unpleasant smell, and necessitates a daily cleaning and sweetening of the room.

Food.—When wild, their food consists principally of worms, with which they feed their young, and various insects, collected from the marshes and meadows. In autumn they eat mistletoe, service, buckthorn, and juniper berries.

In confinement they are not dainty, being exceedingly well satisfied with the universal pastes. Crushed barley, or wheaten bran, moistened with water, suits them very well, and is the food on which fowlers feed these and other large birds, which they keep in flocks for decoys, throughout the year. If it be wished to improve their singing, they may be fed with meat, bread, and whatever comes to table, none of which they will refuse. They are also fond of bathing.

Breeding.—The nest of the Missel Thrush may be found in the woods as early as March, built sometimes high, sometimes low upon the tree. The outside is formed of dry stalks, covered with lichen; the next layer of moss, with the earth still adhering to its roots; the inmost of fine root fibres and grass stalks. They breed twice a year; the female laying each time four greenish white eggs, thinly spotted with violet and reddish brown. The young birds are grey on the upper part of the body, and very much spotted on the belly, the wing feathers having a broad edge of rusty yellow. They are not so docile as the Blackbird; and besides their natural note, learn to imitate only a few unconnected notes, which they are in the habit of hearing constantly. They are to be fed with bread, soaked in milk; and become so tame, as to sing while on the hand.

Diseases.—Those to which the Missel Thrush is most liable, are the obstruction of the rump gland, constipation, and atrophy.

Mode of Taking.—In autumn and winter, these birds may be taken in great numbers with nets and snares, baited with berries. From December to February, they may be caught with limed perches, placed under trees on which the mistletoe grows; a process which may be successfully repeated after the interval of a week. After sunset they may be taken in the water-trap. Those which are more yellow than others on the lower part of the body, being the males, are preserved for confinement. When first caught they are very wild, and many starve themselves to death; but those which are saved soon become tamer.

Attractive Qualities.—As early as February the Missel Thrush may be observed on the top of a tree, especially at night and morning, singing its clear and melancholy song;—this, which consists of five or six unconnected notes, is too loud for the sitting-room, and the cage should therefore be hung in an adjoining apartment, or in a large hall. Its cry is a twittering *Jis-rrr!* It lives in confinement ten or twelve years.

ADDITIONAL.—The Grey Thrush, Holm Thrush, Screech Thrush, Storm Cock, and Missel or Mistle Thrush, are various names applied to this, the largest of British songsters. “There is a sort of double naming in this bird,” says MUDIE; “it is called the Missel Thrush, because it ‘missels’ (soils) its toes with the viscid slimy juice of the mistletoe berries, of which it is very fond in the winter; and the mistletoe gets its name because it soils the toes of the bird.” We have some doubts as to the correctness of this rather fanciful piece of etymological information, at all events, as regards the origin of the name of the plant; into this, however, it is not our business to enquire at present; we may therefore proceed to quote what other authors say of the bird.

“The people of Hampshire,” says GILBERT WHITE, “call the Missel-bird the Storm Cock, because it sings early in the spring in blowing, showery weather. Its song often commences with the year. With us it builds much in orchards.” This author also alludes to its fierceness and pugnacity during the breeding season, and says that “the Welch call it *pen y llwyn*, the head or master of the coppice. He suffers no Magpie, Jay, or Blackbird to enter the garden where he haunts, and is, for the time, a good guard for the new-sown legumens. In general he is very successful in defence of his family; but once I observed in my garden that several Magpies came determined to storm the nest of a Missel Thrush. The dams defended their mansion with

great vigour, and fought resolutely ; but numbers at last prevailed : they tore the nest to pieces, and swallowed the young alive."

KNAPP considers the song of this bird, which is in his ears anything but melodious, as a pretty sure indication of stormy weather. "The flight of the Missel Thrush," observes YARRELL, "is rapid, but irregular and uneven, being performed by a succession of jerks. Its food is various soft-bodied animals, as worms, slugs, &c. ; and it is also a most decided feeder on berries of all sorts. A botanist has reminded me that the red berries borne by the plant named butcher's broom (*Ruscus aculeatus*), which grows on bushy commons, are called holm-berries ; the name Holm Thrush may have been acquired by this bird from feeding on the Holm-berry." Probably, however, as this author opines, the title may have originated in the partiality of the bird for the oak-tree, from the top of which it delights to pour out its mellow song, one species of that tree, the evergreen oak, being called by old English writers the holm.

MACGILLIVRAY mentions that he has not met with this bird in the Hebrides, or even in the northern division of Scotland, and that in the middle division of that country it is very rare, although he has seen it even among the Grampians. In the southern parts it is not uncommon either in the cultivated districts or among the central hills. A correspondent of his, MR. WEIR, asserts that this is one of the most voracious of our native birds, and that he has known it to carry off the young of other birds to feed its own brood with.

138. THE SONG THRUSH.

Turdus Musicus, LIN. *Le Grive*, BUF. *Die Singdrossel*, BECH.

Description.—This bird might without impropriety be called the Small Missel Thrush, so much does it resemble the preceding, in form, colour, habit of life, song, and general bearing. It is eight inches and a half in length, of which the tail measures three inches and a half. The beak is nine lines long, horn-brown, except the half of the lower mandible, nearest the root, which is yellow. The iris is nut-brown ; the feet, one inch in height, and a pale lead colour. All the upper part of the body is olive-brown ; the throat whitish yellow, with a black stripe down each side ; the sides of the neck and the breast, light reddish yellow, covered with numerous dark brown heart-shaped spots. The belly is white, with dark brown oval spots. Both rows of the larger wing coverts have triangular orange spots on the tips ; the inner

coverts are light orange ; the pen feathers greyish brown, as are also the tail feathers, the outermost of which are edged with white on the external plume.

In the female several little streaks are substituted for the black lines on the throat ; the breast is a pale whitish yellow ; and the orange tips of the wing coverts are not so large as in the male. As is the case with all the commoner singing birds, there are several varieties of the Thrush ; *e. g.* The White, White-headed, Mottled, Grey and others.

Habitat.—The Song Thrush is a well-known bird throughout Europe, and frequents woods near streams and meadows. When the weather begins to break in September, it collects in large flocks, and migrates to a warmer climate. A little before and a little after Michaelmas, is the time when it is usually met with in its passage. It returns about the middle of March, or a little later, when every male may be heard singing his spring song, perched on the same tree from which he sang the year before.

In confinement, the Song Thrush may be treated like the Missel Thrush, though perhaps more deserving of a handsome cage, both because it sings better, and is a smaller and less dirty bird.

Food.—In a wild state its food is the same as that of the Missel Thrush ; and in the aviary it may be treated in almost the same manner. Barley groats and milk are an excellent diet for it ; and it requires a constant supply of fresh water both for bathing and drinking. It is sometimes difficult to induce old birds, when first caught, to eat the food of the aviary.

Breeding.—The Song Thrush prefers to build its nest on small pine or fir trees ; or, when these are not to be found, on the thick lower branches of beeches, oaks, aspens, pear, and apple trees. The nest is large, and is constructed of various kinds of lichen, mixed with earth, loam, or cow-dung. The female lays twice a year, from three to six green eggs, covered with blackish brown spots. The first brood is usually fledged about the middle or end of April. On the upper part of the body, the young have a spotty appearance ; and if taken from the nest when half fledged, and fed with bread and milk, learn to whistle airs and tunes. The Song Thrush builds by preference near water ; and the nest may easily be found in the situations above described.

Diseases, and Mode of Taking.—The remarks already made on these heads, in the case of the Missel Thrush, apply to the Song Thrush, as well as the three following species. Of all birds it is most frequently caught in snares and nooses, and in September and October, before sunrise and after sunset, may often be taken in the water-trap. Time must be allowed for them to get fairly into the water, as in this case eight or ten may often be taken at once. Their call when bathing is quite peculiar, and never heard at any other time; the first to find the water cries very loudly, *Seek, seek, Seeki! Tsak, tsak!* and is answered with the same cry by all within hearing. The Song Thrush is, however, a very cautious bird, and rarely goes into the water till it sees another bird—as, for example, a Redbreast—already there. The first which ventures is soon followed by others, and a fight ensues, if there be not room for all. It is a good plan to have a decoy-bird fluttering about near the water.

Attractive Qualities.—The Song Thrush is the great enlivener of our woods; announcing from the highest trees the arrival of spring, by its varied and beautiful song, and continuing its melody throughout the summer. It is especially fond of singing in the morning and evening twilight. Amateurs prize it chiefly on account of its song, which, as early as February, is heard in such sonorous and melodious strains as to delight a whole neighbourhood. If its food be properly varied, the Song Thrush will live for six or eight years.

ADDITIONAL.—The Song Thrush, Garden Thrush, Throstle, or Mavis, is one of those birds which, whether in a state of liberty or confinement, may always be listened to by the lover of melody with gratification. It is one of the commonest as well as the best of our native songsters; indeed, we might perhaps say *the best*, and in this we should be borne out by BOLTON, who says, “It is the finest of our indigenous singing birds, not only for the sweetness and variety of its notes, but for the long continuance of them, as it delights us with its song for three parts of the year.” In this country, according to WHITE, the Throstle begins to sing between the sixth and twenty-second of January, and it may constantly be heard singing late into the autumn: as a rule, it may be inferred, that early singers are also early breeders. YARRELL says, “I remember to have seen young Thrushes on the last day of March;” and JENYNS, in his *Manual*, tells us that the young of the first brood are hatched about the

beginning of April, and sometimes earlier; and NEVILLE WOOD states, that he has sometimes found Garden Thrushes' nests begun as early as the middle of February, although he had never known them completed, the coming on of a frost having generally put a stop to the work.

WHITE, among other naturalists, has called attention to the circumstance that Thrushes render great service to man by destroying vast numbers of snails, in detaching which from the old walls and garden palings, to which they adhere very firmly, and in the breaking of their shelly covering, these birds display great perseverance and sagacity. "I have frequently observed," says JESSE, in his notes to *White's Selborne*, "Thrushes place a shell snail between two stones, or a hollow in a gravel walk, to prevent their rolling, and then picking them till they broke them." KNAPP may also be quoted on this head; but the following interesting anecdote from his *Journal*, seems to have a better claim upon our space:—

"We observed this summer two common Thrushes frequenting the shrubs on the green in our garden. From the slenderness of their forms, and the freshness of their plumage, we pronounced them to be birds of the preceding summer. There was an association and friendship between them, that called our attention to their actions; one of them seemed ailing, or feeble from some bodily accident; for though it hopped about, yet it appeared unable to obtain sufficiency of food; its companion, an active, sprightly bird, would frequently bring it worms, or bruised snails, when they mutually partook of the banquet; and the ailing bird would wait patiently, understand the actions, expect the assistance of the other, and advance from his asylum upon its approach. This procedure was continued for some days, but after a time we missed the fostered bird, which probably died, or by reason of its weakness met with some fatal accident. We have many relations of the natural affection of animals; and whoever has attended to the actions of the various creatures we are accustomed to domesticate about us, can probably add many other instances from their own observation."

BRODERIP, in his *Zoological Recreations*, observes, in reference to this bird, that "it was evidently one that ministered to the absurd wantonness of the Roman voluptuaries in their olio's of brains and tongues of singing birds. Even in the present day, as we learn from a distinguished ornithologist of this country, it is considered among the Italians as '*molto grato agli Epicurei*.' The luscious grapes and figs on which it there feeds, are said to impart a most exquisite flavour to its flesh, which seems well appreciated by the *ex-maitre d'hôtel* of Pascal Bruno's

friend, the Prince Butera, when the accomplished artist treats with all the solemnity due to the high importance of the subject, of his *Grives à la broche, au genièvre, and à la flamandes*. There is, it is true, no accounting for tastes, and we would speak with all reverence for discriminating palates ; but some may think that all taste, save that for the pleasures of the table, must have vanished, before the gourmand can sit down with gratification to his dish of Song Thrushes."

139. THE FIELDFARE.

Turdus Pilaris, LIN. Litorne ou Tourdelle, BUF. Der Wachholder-drossel, BECH.

Description.—In size this bird is between the Missel and the Song Thrush ; being ten inches long, of which the tail measures four inches. The beak is one inch long, in general yellow, but blackish at the point, and somewhat curved in the upper part. The opening of the throat and the tongue are yellow ; the iris dark brown ; the feet a blackish brown, and one inch and a quarter in height. The upper part of the head and neck, the bottom of the back and the rump, are ashen grey, with some blackish spots on the top of the head. A white stripe passes over the eyes ; the cheeks are ashen grey ; the back rusty brown ; the throat, half-way down the breast, a rusty yellow, with black heart-shaped spots. The rest of the under part of the body is white, having black heart-shaped spots on the sides, and long spots of the same colour at the vent. The wing-coverts are rusty brown ; the larger ones mottled with ashen grey. The pen feathers are blackish grey ; the tail feathers blackish, the outermost having the outer half white.

In the female the upper part of the beak is more grey than yellow ; the head and rump of a paler grey ; the throat white, the back a dirty rust colour, the feet dark brown.

There are also many varieties, e. g. The White, the Spotted, and the White-headed Fieldfare.

Habitat.—This bird is to be found not only all over Europe, but even in Siberia. The pine woods of the north are its summer abode, where it builds its nest upon the highest trees. In the middle of November it enters Germany in flocks, and passes the winter wherever the juniper berry is plentiful. In March or April, according to the mildness of the season, it again departs towards the north. When in captivity, it is treated

like the Missel Thrush, and is chiefly prized by the amateur as a decoy. Its cage must not be hung too near the fire, as, being a native of the north, heat is injurious to it.

Food.—In a state of nature, it lives in summer on worms and insects, in autumn and winter on berries, especially juniper berries.

In confinement it may be fed like the two preceding species; or better still, with bread, crushed barley, and grated carrots.

With regard to the diseases of this bird, and the mode of taking it, the same remarks apply as to the two preceding species.

Attractive Qualities.—The Fieldfare's song is insignificant, being merely a shrill unpleasant twittering; nor would it deserve a place among Cage-birds, were it not useful to bird-catchers as a decoy. Its call is *Sha-sha-shak! Quiri-quiri!*

ADDITIONAL.—This bird appears to form a sort of connecting link between the uniformly coloured Thrushes, or Ouzels, and the Spotted Thrushes, having, as MACGILLIVRAY observes, “the form of one and the colouring of the other set, to either of which, therefore, it may be referred. It is rather a stout bird, to which the length of the wings and tail impart a considerable degree of elegance.” It is variously known as the Feltyfare, Fieldfar, Feltyflier, and Grey Thrush, in Gaelic *Liath-Troisg*. The naturalist above named, furnishes us with the following particulars as to its haunts in this country:—“About the end of October, sometimes in the beginning of November, the Fieldfares make their appearance in the northern and eastern parts of Britain, where some of them remain all the winter and spring, while others disperse over the country. In the wooded parts they rest at night on tall trees, at least I have seen them so roost at night after sunset; but MONTAGUE affirms that they repose on the ground, which may be the case, and certainly they must sleep there or on rocks in the Hebrides, where they are met with during the cold season. I know no place where one can study their habits more effectively than in the neighbourhood of Edinburgh, where they are met with in flocks of from several hundreds to three or four individuals. When the ground is covered with snow, the Fieldfares betake themselves to marshy meadows, where they are often shot in great numbers; for though repeatedly annoyed, they return at short intervals, and persons stationed here and there along the hedges, are sure of obtaining many chances. Should the pools and brooks be frozen, they repair to the woods and hedges, where they obtain a supply of hawthorn,

holly, and other berries, of which various kinds constitute their food in spring, together with worms, larvæ, pupæ, and insects, as well as seeds of cereal and other plants; but I have never, in the most severe weather, seen them in corn-yards, although they frequently enter gardens in time of snow to eat the holly berries. They employ a small quantity of fragments of quartz and other hard substances to aid the tituration of their food, and utter, when alarmed and flying off, a chuckling cry, resembling the syllables *yuck, chuck, chuck, chuck.*" WHITE expresses wonder "that Fieldfares, which are so congenerous to Blackbirds and Thrushes, should never choose to build in England," nor even think the Scottish Highlands cold and northerly and sequestered enough for their purpose; and controverts the opinion of MACGILLIVRAY that these birds roost upon trees, where trees are to be found. "They are seen," he says, "to come in flocks just before it is dark, and to settle and nestle among the heath in our forests. And besides, the larkers, in dragging their nets by night, frequently catch them in the wheat stubbles; while the best fowlers, who take many Redwings in the hedges, never entangle any of this species."

140. THE REDWING.

Turdus Illacus, LIN. *Mauvis*, BUF. *Die Rothdrossel*, BECH.

Description.—This bird, which bears a great resemblance to the Fieldfare, is smaller than the Song Thrush. It is eight inches in length; of which the tail measures three inches and a quarter. The beak is blackish, yet yellow about the corners and the base of the lower mandible. The iris is nut-brown; the feet one inch high, and pale grey; the toes light yellow. The head, neck, back, rump, and lesser wing coverts are olive brown. A yellowish white stripe runs from the nostrils to a considerable distance behind the eyes; and the cheeks, which are finely streaked with yellow, are surrounded with a similar stripe, which terminates in a dark yellow spot, on the side of the head. The throat and breast are whitish yellow, with many triangular dark-brown spots; the rest of the lower part of the body white, somewhat spotted on the sides and vent with olive brown. The sides, as well as the lower wing-coverts and the pen feathers, are mottled with dark reddish brown; the feathers of the wing coverts being tipped with orange, and the two hindmost pen feathers with white. The tail feathers are greyish brown, rather lighter at the points.

The plumage of the female is in general paler; the stripe

over the eyes is almost white, and the spot on the side of the head a clearer yellow. The prevailing colour of the lower part of the body is white, inclining to yellow on the neck only; the spots on the breast are greyish brown, and there are none on the vent.

There are also white and mottled varieties.

Habitat.—In a wild state these birds are natives of the north of Europe. They arrive in Germany for the winter towards the end of October, and depart at the end of March or beginning of April.

With regard to their general treatment in captivity, their food, diseases, and modes of capture, the same remarks apply as to the preceding species.

Attractive Qualities.—The males utter in spring and summer a few twittering notes, as unmelodious as the song of the Fieldfare. When large flocks collect in March or April on the alders, their twittering does indeed make a great noise; but there is nothing in this to be dignified with the name of a song, though I have heard one which might have been mistaken for a poor Song Thrush, and even uttered some few Nightingale notes. Their principal attraction as Cage-birds lies in their tameness, familiarity, patience, and apparent readiness to adapt themselves to circumstances. Bird-catchers also use them as decoys.

It must be remembered that they cannot bear heat, and often require fresh water.

ADDITIONAL.—With us this bird is sometimes called the Wind Thrush, and sometimes the Swinepipe. It is the smallest of British Thrushes, and in the north is said to be so sweet a songster, as to have obtained the name of the Norway Nightingale. These birds commonly reach our shores in October, and depart in the month of May; the only music that we get from them is a sort of plaintive piping note. The following is MUDIE's account of their habits:—"Redwings appear in flocks, are lovers of peace, and mingle freely with the Fieldfares; the two, indeed, seem alike at the mercy of storms during the winter, though the Redwings usually come first, and occupy the ground. While the weather continues open, they remain on the pastures and fields, in those places where they land, and roost for the night in hedges and copses, in search of wild berries, and continue till these also are exhausted; and if they are then overtaken by a storm, many of them perish, as, like the Fieldfares, they seem to have but

little command of themselves in a gale. If the season is variable, they work their way southward, but suffer very much from hunger and fatigue; and many of them are smothered in the snow, if overtaken by heavy falls, in their attempts to pass the central heights.

"Redwings, as well as Fieldfares, are often found in those parts of Britain which have the greatest resemblance to the countries where they nestle, as late as the middle of May, or even the first of June, detained, no doubt, chiefly by the east winds, which blow dry and cold at that season; but the same instinct, the same obedience to the state of the weather which retains them with us, prevents them from breeding, or even singing in this country. BULLOCK mentions their breeding in the island of Harris, but that is out of the line of their ordinary migration; and though it may be true in the instance which he gives, it is certainly not true as a general feature of the ornithology of that island. The song of the Redwing is not known there, any more than it is on the coast of Northumberland or East York; but where any singing bird breeds regularly, its song is sure to be known, not to naturalists merely, but also to the country people."

141. THE BLACKBIRD.

Turdus Mérula, LIN. *Merle*, BUF. *Die Schwarzdrossel*, BECH.

Description.—This bird, the most docile of all Thrushes, is about the size of the Song Thrush, being nine inches and a half in length, of which the tail measures four inches. The beak is one inch in length, and bright yellow; the iris dark brown; the feet black, and fourteen lines in height. The male is black all over the body; the female blackish brown, tinged on the breast with rust-colour, and on the belly with grey. She seems also to be somewhat larger than her mate, which has led some persons into the mistake of describing her as a separate species. As in the case of other species of Thrush, varieties of this bird have been noticed. For example, the White, Grey, White-headed, Variegated, &c.

Habitat.—The Blackbird inhabits nearly the whole of the Old World, and in Europe is found as far north as Sweden. In Germany it is the only species of Thrush which is not migratory.

In confinement it is advisable to keep the Blackbird in a large cage, as, if allowed to range the room, it is apt to become tyrannical and violent, and, like the Tits, often kills smaller birds.



Stewart delt.

BLACKBIRD & SONG THRUSH.

Lizars

Food.—The food of the Blackbird is the same as that of other Thrushes; though, in winter, it is often obliged to be content with the berries of the white-thorn. At the same season of the year it may frequently be seen near warm springs, in search of insects and earth worms.

In the aviary it is satisfied with the first universal paste, but will also eat bread, meat, and whatever is brought to table. Like others of its kind, it is very fond of bathing. It is, however, a tender bird, and would not live long on so simple a diet as bran and water.

Breeding.—As the Blackbird is not a bird of passage, it pairs very early in the year, so that the young birds may often be found in the nest as early as the end of March. The nest is placed in some thick bush, often not very high from the ground, and is constructed of earth and moss interlaced with twigs, and lined with fine grass-stalks and hair. The female lays twice or thrice a year five or six eggs, of a greyish green colour, covered with light brown and liver-coloured spots and stripes. The young males are always rather darker than the females, and can by this means be distinguished from them even in the nest. They may be taken as soon as ever the tail feathers show themselves, and reared on bread and milk. By this mode of treatment they become sooner accustomed to the food of the aviary, and, if taught an artificial song, learn it more perfectly, and do not confound and mix it with their own.

Diseases.—The disease to which the Blackbird is most liable is an obstruction of the rump-gland, which may be treated in the manner mentioned in the Introduction. It lives in confinement from twelve to sixteen years, especially if its food be judiciously varied.

Mode of Taking.—The Blackbird is very shy, and is seldom caught in the barn-floor trap, though in winter it may easily be taken in nooses and springes, baited with service berries. At the same season it falls into the large Tit traps, baited in the same manner, or may be caught in a place cleared from snow and set with limed twigs. After dark it may frequently be taken in the water-trap; and before bathing utters a call similar to that of the Song Thrush. The call is *Tzitzirr! Tack, Tack!*

Attractive Qualities.—The song of the male is melodious, and consists of deep sonorous passages, like those of a Night-

ingale, though intermixed with others which are rather harsh. In a wild state it sings from March to July, especially by night; but in confinement throughout the year, except in the moulting season, and in so loud and joyous a tone as to be audible at a considerable distance. Its memory is so good, that it learns not only to repeat words, but to whistle several airs without confounding them together.

ADDITIONAL.—In all the wooded and cultivated tracts of England, Scotland, and Ireland, may the loud, mellow, clear song of the Black Thrush, Garden Ouzel, or Merle, as this bird is variously called, be heard from the very beginning of spring to the middle of July, and frequently very late into the autumn. We quote a portion of MUDIE's account of this familiar and favourite songster:—"The haunts and habits of the Blackbird are nearly the same as those of the Thrush, only it is more familiar, and, in proportion to its numbers, less seen. The disposition of the bird is shy and solitary, more so than the Thrushes, as the Blackbirds separate as soon as the young are able to provide for themselves, and never again assemble, except in the breeding time. It has been said that they do not all associate even then, but that there are many solitary Blackbirds which pass the whole year in a state of sulky celibacy. There is no reason for carrying the matter quite so far as that: the Blackbird is as attentive to its nest and young as any other of the tribe; and its evasive habit, or simply the facility with which it slips through hedges and in and below bushes, not probably so much from the wish of hiding itself as in mere search for its food, is the foundation of the whole."

Like the Thrush, the Blackbird commences its song very early in the morning, and continues to sing late into the evening. MACGILLIVRAY says—"On the 1st of May, 1837, a Blackbird in the garden commenced his song at three in the morning; a fortnight after, I heard one as early as half-past two; and in the middle of the summer I have listened to it before going to bed, when the twilight peeped in between the shutters upon the untired student, thus admonished of the propriety of intermitting his labours. The first morning song of the Blackbird is very singular, and altogether different from that of the evening, consisting of repetitions of the same unmusical strain, performed with a harsh screaming voice. It continues for a quarter of an hour or more, and is not again heard until towards sunrise, when it is renewed in a bolder, louder, and more joyous strain. In cold and cloudy weather, however, this twilight strain is seldom heard, for then the bird waits until it is full day before it commences its song.

Although the Blackbird sings at all times of the day, it is more especially in the mornings and evenings that it pours forth its delightful melodies, which, simple as they are, I am unable to describe in a more effective manner than by characterizing them as loud, rich, mellow, and much surpassing in effect those of any other native bird, excepting the Nightingale, Song Thrush, Blackcap, and Garden Warbler. I have heard individuals singing most fervently in the midst of a heavy thunder storm, when the rain was falling thickly, and the lightning flashing at an alarming rate ; and both this species and the Song Thrush seem to regard the summer rains with pleasure. The season at which the Blackbird is in full song, commences about the middle of February, and ends about the beginning of August ; but in calm, and especially warm weather, whether clear or cloudy, it may sometimes be heard in the winter and early spring months."

This is a prolific bird ; MR. BLYTH mentions a pair that built four successive nests in 1837, on an island in St. James's Park, and reared seventeen young ones, the first three broods consisting of five each. MR. WEIR records a case of a Blackbird and Thrush breeding together in a wild state ; and another instance of this is mentioned by MR. RUSSELL, of Moss-side, but neither of these gentlemen had an opportunity of securing the fruits of this connection.

A writer in *Chambers' Edinburgh Journal* illustrates, by the following anecdote, the usefulness of this bird as a destroyer of insect pests :—" A grass plot attached to a country house, was once visited by a dozen or two of Blackbirds for several days in succession ; they ploughed it up so diligently with their bills, as to make the surface look rough and decayed. The owner of the property, unwilling to shoot the intruders, caused the grass plot to be dug up in several places, when it was found to be overrun with the larvæ of chafers. The birds were left in undisturbed possession ; and although the walls were covered with ripe fruit, they left it for the grubs which they effectually destroyed, and the grass plot soon resumed its original appearance."

Instances of this species of bird with plumage wholly or partially white, have not unfrequently been met with. WILLOUGHBY'S theory that such birds were natives of mountainous districts, is hardly tenable, as an *albino* is sometimes found in a nest with others of the common sable hue.

According to VARRO, the term Merle is derived from the habit of this bird of flying *mera*, or solitary ; hence, too, its generic name, *merula*.

"Merry it is in the good green wood,
When the Mavis and *Merle* are singing."

sings the forester in *The Lady of the Lake*; and most of the Scottish poets allude to the Blackbird under this title; thus, GRAHAME says—

“List to the Merle’s dulcet pipe! melodious bird!
Who, hid behind the milk-white hawthorn’s spray,
Whose early flowers anticipate the leaf,
Welcomes the time of buds, the infant year.”

Several of the older English poets, too, thus distinguish “the Golden Bill,” as he is often called. DRAYTON, for instance, says—

“Upon the dulcet pipe the *Merle* doth only play.”

SHAKSPEARE gives us another variation of the term Ouzel, when he says of

“The *Woosel-cock*, so black of hue,
With orange tawny bill.”

142. THE RING OUZEL.

Turdus Torquatus, LIN. *Merle à Plastron Blanc*, BUF. *Der Ring-drossel*, BECH.

Description.—This bird, which is somewhat larger than the Blackbird, is ten inches and a half in length, of which the tail measures nearly four inches. The beak is almost one inch long, and in colour horn-black, except on the under side near the root, and at the corners, where it is yellow. The colour of the plumage is black, the feathers on the belly and wing coverts being edged with white; the pen and outer tail feathers with grey. A reddish white transverse stripe, about the breadth of a finger, crosses the upper portion of the breast, from which the bird derives its name.

In the female the plumage has a lighter tinge, or is inclined to brown, and the stripe on the breast is narrower, less distinct, and reddish grey, clouded with brown. Those birds which have in other respects the plumage of the female, yet in which the stripe on the breast is distinct, are young males; those in which it is hardly visible, young females.

Observations.—The Ring Ouzel is a European bird, which breeds only in the north, and at the commencement of the cloudy weather in October and November, comes in small flocks to Germany, where it frequents the woody and mountainous districts. It may be taken with nooses and snares. Its food, both when wild and in the aviary, is the same as that of the

Blackbird, and in its gestures and general behaviour it bears a strong resemblance to that bird. Its cry is *Tak!* Its voice is hoarse, hollow, and so weak, that a Redbreast can overpower it, yet not disagreeable. It sings throughout the year, except when moulting, and lives in confinement six or seven years.

ADDITIONAL.—Rock Ouzel, Ter Ouzel, Mountain Ouzel, White-breasted Blackbird, Moor Blackbird, and Ringed Thrush, are the several names applied to this bird, which is very similar to the species last described in form and colour, from which, however, it is readily distinguished by the brownish white patch on the breast, which has been said to resemble a collar or ring; hence its name. MUDIE remarks, that “the pure white gorget is always a characteristic of the mature males. The young males have it reddish; the old females clouded with brown and grey, and in the young females it is barely visible.”

MACGILLIVRAY says that “the Ringed Thrush arrives in the south of Scotland about the middle of April, and departs in the beginning of October. It betakes itself at once to the open hilly and mountainous tracts, where it prefers the shelter of the juniper, furze, and heath bushes to that of woods or thickets. Extremely shy and vigilant, it seldom permits a near approach, but betakes itself to flight on the least alarm. Its manners, however, are very similar to those of the Blackbird; and as I have studied them with some attention, I am enabled to speak with certainty respecting them. A few individuals are found here and there among the Lammermoor and Pentland Hills, generally in the vicinity of masses of furze and juniper; and I have met with the species in several other parts of Scotland, and even in the island of Skye. Its flight is strong and direct, or with very little undulation. When pursued, it generally flies at once to a considerable distance, and it is only when you come near its nest or young, that it ventures within shooting distance. Like the Song Thrush, it conceals itself among the bushes, but is much more easily put to flight. When alarmed, it utters a repetition of strong clear notes, like those of the Blackbird, but louder; and its song consists of a few simple, loud, and mellow notes. The nest, according to a person who informs me that he has several times found it, is placed under the shelter of a furze or juniper bush, or on the face of a rough bank, or among fragments of rock. It is composed of coarse grass, plastered internally with mud, and lined with fine grass. The eggs, from four to six, are regularly oval, pale blueish green, freckled all over with pale brown. The young, fully fledged, I have had from the Pentland Hills on the 7th of June.”

According to HEWETSON, the Ring Ouzel sings sweetly; SELBY says, “clearly and powerfully, though the notes were few.”

143. THE REED THRUSH

Turdus Arundinaceus, LIN. *Rousserole*, BUR. *Die Rohrdrossel*, BECH.

Description.—This bird resembles the Whitethroats in so many respects, as to render it doubtful whether it should be classed with them or with the Thrushes; though its beak and feet, as well as the general form of its body, seem to ally it to the latter species. It is rather larger than the Skylark, being eight inches in length, of which the tail, which is wedge-shaped, and rounded at the end, measures four inches and a quarter. The beak is ten lines long, strong, compressed at the root; on the upper, and at the point of the lower mandible, horn brown, and yellowish at the root. The iris is dark brown; the feet one inch in height, strong, greyish brown, inclining to flesh-colour, and having a very long hinder claw. In colour the Reed Thrush is very like the Nightingale; the upper part of the head and neck are dark grey, tinged with olive green; a dingy yellowish white stripe runs from the nostrils to that part of the forehead between the eyes; the cheeks are greyish brown. The upper and centre part of the back are rusty grey, becoming gradually lighter towards the rump, which is rusty yellow. The chin and throat are light grey; the breast and belly yellowish white, the former having a dark grey spot on each side near the neck. The sides, shanks, and vent, are white, strongly marked with rust colour, which gives a yellow appearance to all the lower part of the body. The pen feathers are dark brown, with a narrow border of rusty yellow; the tail feathers reddish grey, edged with a lighter shade of the same.

The female is scarcely distinguishable from the male. It is somewhat smaller, darker on the upper, but lighter on the lower part of the body. The top of the head is marked with rust colour, and the throat is not ashen grey, but white.

Habitat.—The Reed Thrush is a native of all but the coldest parts of Europe; and is common in Germany, where it frequents those districts which abound in reedy ponds and lakes, or in extensive bogs and morasses. It is rarely seen upon a tree, but climbs up the reeds and bullrushes, like a Woodpecker. In confinement it may be kept in a Nightingale's cage.

Food.—In a wild state it devours great numbers of aquatic insects, and occasionally eats elderberries. In the aviary it

requires the same food as the Nightingale; but is subject to the disease which is fatal to many of the Whitethroats. After six months, or less, the feathers drop off, are not renewed, and the bird dies of atrophy.

Breeding.—The nest of the Reed Thrush is fastened to two or more reeds, by means of wool, and is constructed of lichens and strong grass stalks, lined with finer stalks and hair. The female lays from three to five eggs, which are greyish white, spotted with olive colour and black. Before the first moulting, the young birds are exactly like the Fauvette, and are spotted on the breast with black. Their cry is like that of the Mountain Finch, but, if taken from the nest when quite young, reared on ants' eggs, and put under the instruction of a good Nightingale, they become incomparable singers.

Mode of Taking.—The difficulty of taking these birds makes them scarce in our aviaries. The only successful method, except the barbarous one of liming their nests, is to mark some spot which they frequent, scratch up the earth, and set limed twigs, baited with meal-worms.

Attractive Qualities.—The male has an exceedingly loud and beautiful voice. Its song is more various and flute-like than that of the Song Thrush, though not equal to that of the Nightingale, with which it has sometimes been compared. In many passages it resembles that of the Black Cap, though, as is the case with all the Thrushes, not so sustained. It usually sings at night and morning, and while singing, keeps—evidently from pleasure—not only its throat, but also its whole body in motion.

144. THE ROCK THRUSH.

Turdus Saxatilis, LIN. *Merle de Roche*, TEM. *Die Steindrossel*, BECH.

Description.—This bird is but seldom seen in confinement in Central and Northern Germany, though better deserving the amateur's care than many foreign species. In several parts of Germany it is all but unknown, and if ever taken by the bird-catcher, it is mistaken, especially the female, for a large Redstart. It is about the size of a Redwing Thrush; being seven inches and six lines long, of which the tail measures two inches and three-quarters. In appearance and habits, it is more like a Starling (especially in its gestures and movements, which are remarkably various and amusing) than a

Thrush, although possessing the characteristics of the latter bird. The beak black, with yellow corners, is one inch long; the strong black feet one inch and a quarter high. The head and neck are greyish blue, or bluish ashen grey; lighter in the old birds than in the young ones. The upper part of the back dark brown, sometimes clouded with a lighter tinge; the middle a beautiful white; the rump dark brown, with white edged feathers. The breast and belly are dark orange; the latter spotted or clouded with white, more or less distinctly, according to the time of the year, an appearance which is caused by the white edges of the feathers. The vent is a pale yellowish red; the wing coverts darkish brown, with white points; the quill feathers very dark brown, or blackish, the hinder ones somewhat lighter, whitish at the points, and having a narrow white border on the further side; the tail dark yellowish red, with the two centre feathers greyish brown.

The female has the upper part of the body dark brown, the feathers bordered with greyish white; the rump is rust coloured with a similar edge; the chin white; the throat like the upper parts, but much lighter; the front of the neck, and all the lower parts, dirty orange, with brown and white wavy lines; the tail as in the male, but somewhat lighter; the feet dark brown.

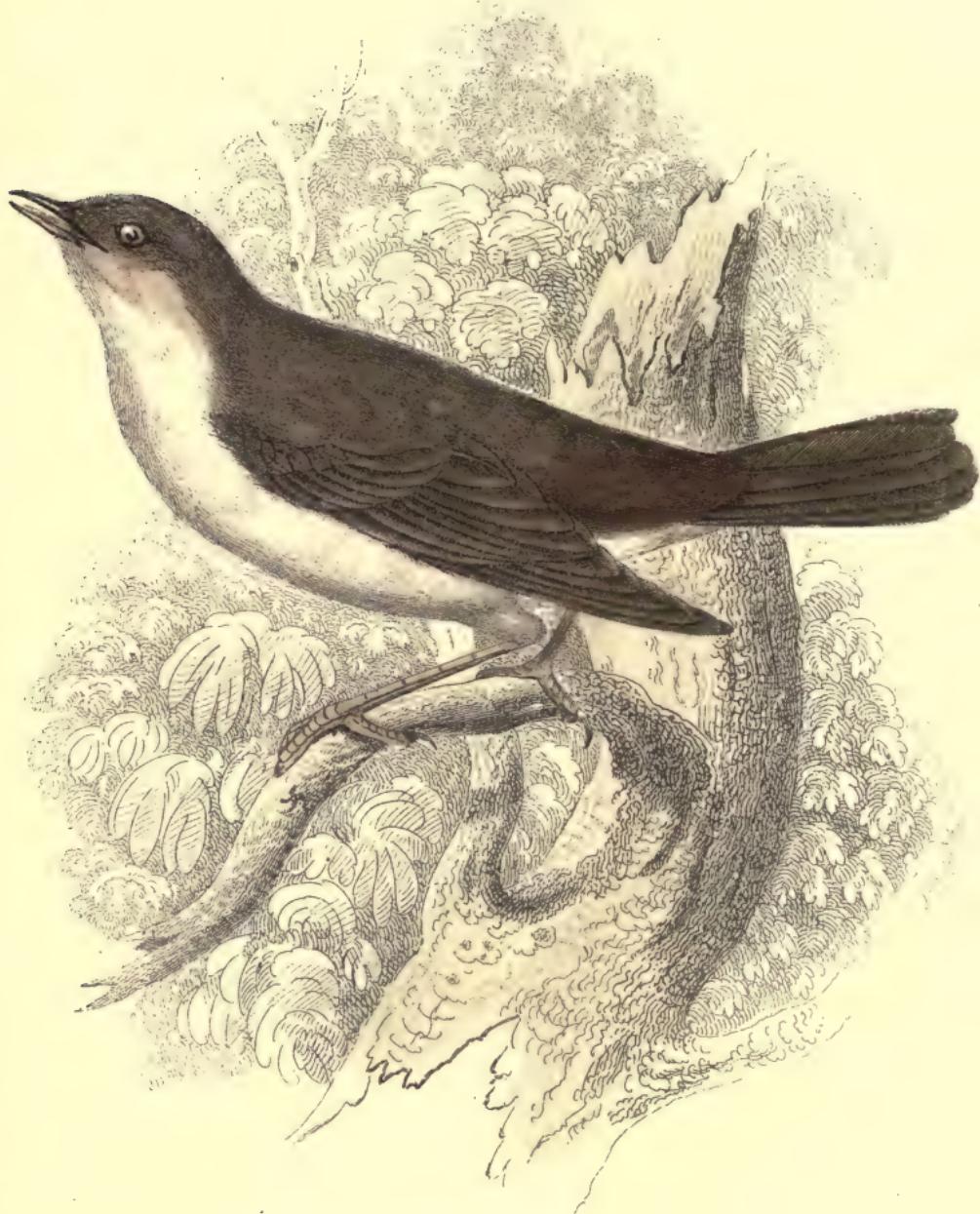
Habitat.—This Thrush is found in Southern Europe and Germany; for example, Austria, the Tyrol, &c., but rarely comes more north. It is common upon the Alps and the Pyrenees. It chooses rocky and stony places, as well as old castles, and even peasant cottages for its abode. In its migrations, it seeks the bare mountains, looking, like the Red-start, for beetles and other insects under the stones. It arrives in March, and takes its departure in September.

When in confinement, it is usually distinguished as a rare bird, with a handsome cage, which should be somewhat larger than a Nightingale's.

Food.—When wild, this bird feeds on insects, but in confinement needs Nightingale's food, to preserve its life and health. It is generally fed with a mixture of bread, yellow rape seed, wheat meal, ants' eggs, and chopped bullock's heart. It sometimes also needs a meal worm.

L^eeding.—The female lays five eggs in the nest, which is generally made in a hole of a rock, or a heap of stones. When reared from the nest, these birds are exceedingly docile.

PLATE 50.



NIGHTINGALE.

Stuart delt.

Lizar sc.

Mode of Taking.—In these parts, it is a mere chance if one be taken. This is, however, attempted by fixing limed twigs, with meal worms attached, near where they are observed to perch. How they are secured in countries where they are common, I do not know. It is said that they are lured by the Owl.

Attractive Qualities.—The male is prized as an exceedingly good songster, especially singing by night, near a lamp. They learn also to whistle tunes; to speak like a Starling, and generally become exceedingly tame.

145. THE NIGHTINGALE.

Sylvia Luscinia, Motacilla Luscinia, LIN. Rossignol, BUR. Die Nachtigall, BECH.

Description.—Were the Nightingale prized only for its plumage, it would hardly deserve a place among the inmates of the aviary. It is about the size of the House Sparrow, being five inches in length, of which the tail measures two inches and a quarter; but in confinement, if well fed, and especially if reared from the nest, it often attains the size of a Lark. The beak, as in all birds of the same genus (*Motacilla*), is straight, oval-shaped, thin, pointed, and having the two mandibles of nearly the same size. It is seven lines long, on the upper side dark brown, on the under light grey; flesh coloured at the root, and yellow inside. The iris is greyish brown; the feet nine lines in height, and brownish flesh colour. The upper part of the body is greyish brown tinged with rust colour, but in very old birds reddish ashen grey; the rump brownish red; the throat, belly, and vent, white; the breast and sides whitish grey; the knee bands grey. The larger wing coverts are tipped with white; the pen feathers greyish brown, edged with rusty yellow; the straight broad tail feathers, which, as in all birds of this species, are very brittle, are a dingy red.

Those which are kept in cages, are sometimes darker, sometimes lighter, than the above description. In Nightingales which hang near the windows of large well lighted rooms, and which are not exposed to smoke either from the fire or an oil lamp, the feathers of the upper part of the body are dark grey, or light greyish brown, edged with rusty yellow; and those of the under part white, tinged with grey on the sides

of the breast and belly ; while, on the contrary, Nightingales which are kept in small, dark, smoky rooms, are dingy rusty yellow on the upper part of the body, greyish white on the lower part, and greyish brown on the sides of the breast and belly.

The connoisseur is able to distinguish the female both by her form and gait. Her legs are not so high, nor is she so erect ; her head is rounder, her neck not so long ; her eyes smaller and less bright ; her throat not so white. Nevertheless, none but an experienced bird faneier could decide upon the sex, except he saw both male and female together.

The Nightingale bears so strong a resemblance to the female Redstart, that the latter is often sold for a Nightingale, and the former cooked for a Redstart. The characteristic differences are therefore worthy of attention. The female Redstart is smaller, and the general colour of her plumage is darker. The feet are thin, and, as well as the beak, black ; the tail is lighter in colour, and its two centre feathers are blackish or dark brown. Her long slender tail also is in continual motion, while the Nightingale only moves his occasionally, and generally carries it above the point of the wings. His gait and bearing are also prouder than those of the Redstart, and his motions more deliberate. He maintains a very erect posture, and there is something very peculiar in his hopping gait. After having made a succession of hops, he stands still, moves his wings, elevates his tail and slightly expands it, nods his head once or twice, and then hops onward again. If anything attracts his attention, he generally looks at it with only one eye ; if he catches sight of an insect, he does indeed hop quickly to the spot, yet does not seize it greedily like other birds, but stands over it a moment, as if in consideration. He has in general a thoughtful air, though it must be confessed, he easily falls into the traps and snares laid for him, as is the case with all birds which are unfamiliar with men ; though if one is caught, he is prudent enough for ever after. He has been called, without just cause, an inquisitive bird, because he always hastens to examine any place on the ground which has been disturbed or scratched up. But this peculiarity, which he shares with other birds of the same genus, is the result of instinct, which teaches him that he will find in such situations the insects which are his favourite food ; while, on the con-

trary, he takes no notice of many things which are put before him, however strange or peculiar they may be.

Habitat.—The Nightingale is found throughout Europe, as far north as the middle of Sweden; in all Asia, except the arctic regions of Siberia; and even in Egypt, on the banks of the Nile. It frequents overgrown, shady, and not very cold places, whether woods, groves, gardens, or hedges. It is rarely found in woods of coniferous trees, where its food is scarce; and in wooded mountain chains, keeps to the outskirts of the forests. It seems to prefer gardens enclosed by high, broad, and untrimmed beech hedges, which afford abundant shelter. It is a mistake to suppose that it has any preference for marshy districts; and if seen there in great numbers, the reason may be found either in the thickets with which such places are often overgrown, or in the fact, that during cold weather, the insects which form the Nightingale's food may be found in greater abundance there than elsewhere. It is, besides, a fact, established by observation, that this bird always returns to its birth-place, whether marsh, mountain, or garden. This attachment increases every year; and when once the Nightingale has made choice of a spot, it always comes back to it—except it fall in the mean time into the hands of the fowler, or the place lose its attraction. If, for instance, the grove be cut down, or the underwood which affords the desired shade be removed, it betakes itself to the nearest convenient situation; but if within a considerable circuit, all remain unaltered, and a Nightingale be observed to frequent a spot not so tenanted the year before, it may with certainty be concluded to be a young bird. Yet, though it is a well-known fact, that the Nightingale returns year by year to the same place, we cannot conclude with certainty that the bird we notice for two successive years in one spot, is the same; as it is also proved by experience, that if a bird which occupies a well-chosen station, be shot or snared, its place is immediately occupied by another. These changes, however, are not easily discovered, except by an ear accustomed to detect slight differences in the language of these birds.

It may be asked why Nightingales are never found in so many districts, which are to all appearance likely to attract them? The following conjectures may, perhaps, throw some light upon this question, which it is of course impossible to

answer positively. Nightingales, on their passage, are ~~able~~ to descry at a great distance high mountains, and such places as from cold, or the scarcity of food, are not adapted for them, and in their anxiety to avoid these, if not absolutely in the line of route, may miss districts which are well suited for their habitation. In the second place, when in want of food and rest, they may be attracted out of the direct line, which they would otherwise have pursued, by the sight of distant woods and thickets. Thirdly, there may be, in places which they do not frequent, an unfavourable condition of the temperature, and a scarcity of proper food, imperceptible to us ; and fourthly, if once the species has become extinct in any district, the constancy with which birds of passage return to their birth-place, would effectually prevent its recolonization. This, however, may be effected by artificial means—if it be thought unadvisable to trust to nature, a brood or two should be reared from the nest, and set at liberty after the period of migration in the autumn. The feeling that the time of departure has passed over, as well as their comparative tameness, will prevent the birds from leaving the place, when in the ensuing year they will probably breed. It is, however, necessary, that Nightingales intended for this purpose, should not be kept in a cage, but allowed, as soon as they are able to feed themselves, to fly about the room, half filled with boughs and bushes, in order that they may acquire the full use of their wings. In the same manner, they should be fed with their natural food, insects and ants' eggs, in order that they may easily find them when set at liberty.

The Nightingale arrives in Germany about the middle of April, and is always there by the time that the buds of the whitethorn begin to burst into flower. As it migrates from place to place—and not in one long journey—it rarely suffers from the weather. It begins to depart about the middle of August, in families, very gradually and in total silence ; and at this period, may be taken in nooses baited with currants and elder-berries. In central Germany, they are to be seen as late as the middle of September, and then leave one by one, so that it is impossible to name any period as that of their final departure. Other birds, such as Swallows, which migrate in large flocks, are not able to escape the eye of the attentive naturalist in the same manner. Sickness, a late brood, or the

inexperience of young birds, are reasons, each of which may explain why a Nightingale is occasionally seen late in September, or even in October, though this is an exception to the general rule.

In the aviary the Nightingale can either be allowed to fly about at will, as I have sometimes permitted mine to do, or may be confined in a cage, in which case they will sing both better and more frequently. The latter course is also preferable, because this bird, to be preserved in health for any considerable period, requires more nourishing food than that given to the other inmates of the aviary. The cage may be of any desired form, but should be from twelve to eighteen inches in length, six to twelve inches broad, and twelve inches in height. It should also be roofed with linen or other cloth, that in its struggling and fluttering, especially when first caught, the bird may not injure its head. The cage which I myself use for the Nightingale, and which I believe best adapted for it, may be described as follows:—it is eighteen inches long, eight inches deep, and thirteen inches high, except in the middle of the arched roof, which rises to the height of fifteen inches. The sides and bottom are made of osiers, about a quarter of an inch in thickness. The floor of the cage is formed by a drawer one inch and a quarter in height, covered with a sheet of blotting paper, which may be changed, for cleanliness' sake, whenever necessary. The feeding trough, which is so constructed that the bird cannot waste its food, is on one side. In front is a projection, half cylindrical in shape, and reaching from top to bottom of the cage, in which a large water vessel is suspended. Two perches are fixed in the lower part of the cage, and a third higher up, opposite the centre of the projection, not attached to it, but terminating in a fork. All these I cover with green cloth, to preserve the feet of the bird, which are particularly tender. The roof should be made of green cloth, and the whole cage painted green; though it is essential to the health of the bird that it be not used till the colour is thoroughly dry. The advantages of such a cage are that it takes up a very little room; that it does not admit the light so freely as a wire cage, and that the bird can bathe without wetting its perches, or the rest of the cage.

In hanging the cage, regard must be paid to the peculiarities

of the little prisoner; some will not sing, except in a dark place; others like to be near the window, and in the full glare of the sun. If it be desired to teach a bird the habit of singing under any variation of circumstance, the best plan is to accustom it to change of place, immediately after the moultling season, when re-learning its song. Some sing best when alone; others when singing with a neighbour; though it is found that if three or more be confined in one room, they will never sing equally well. The one who begins to sing first, generally retains its supremacy, and the others either sing in a low tone, only when it is mute, or preserve an entire and obstinate silence. Instances have been known of Nightingales which, under such circumstances, have been silent for years, and have even been mistaken for females; yet when in a room by themselves, have begun to sing with all their energy of throat and lung.

Food.—In a wild state the Nightingale feeds on insects, especially the small green caterpillars, which are found on the oak and whitethorn; small moths, flies, beetles, and various larvæ, which it finds underneath the surface of the earth. In its autumnal migration, it eats currants, and red and black elder-berries.

When a Nightingale is first caught it should be fed for some days on fresh ants' eggs and meal worms, or on dry ants' eggs, if the fresh are not to be procured. In this case also, some persons make a mixture of hard-boiled eggs, and bullock's heart and bread, with which they cram the bird if it will not feed itself; which they endeavour to induce it to do, by tempting it with meal worms. But the Nightingale's beak is very brittle, and often broken by this rough usage, and the bird does not thrive on the diet; indeed, no one ought to keep a Nightingale, who cannot command a supply of ants' eggs. The best food in summer is indisputably fresh ants' eggs, and two or three meal worms daily.* To use ants, as some persons do, instead of the eggs, is liable to the objection that it cuts

* The best plan to ensure a constant supply of meal worms, is to fill a half gallon jar with wheat-bran, barley, or oatmeal, and a few pieces of sugar paper, or old shoe-leather. In this half a pint of meal worms may be thrown, which if allowed to remain for three months, and occasionally moistened with a cloth soaked in beer, will become beetles, which again lay eggs, and propagate their species with great rapidity. One such jar will supply a Nightingale.

off the chance of a future supply. When fresh ants' eggs cannot be procured, dry ones should be given, mixed with Swedish turnips, and bullock's heart boiled, dried, and grated small. The turnip, which may be preserved fresh in a cellar for a long time, will aid the stomach and bowels in the process of digestion. A little lean beef or mutton, minced small, may be occasionally given with good effect. The cheapest food consists of ripe elderberries, dried like raisins, and mixed with ants' eggs.

In winter, some bird fanciers make a small loaf of pea-meal and eggs, grate it, make it into a paste with water, and mix it with dry ants' eggs. Others, who are anxious to be very economical, crush poppy seeds in a mortar, to express the oil, and mix them with bread-crumbs. To this, which is becoming their usual diet in Thuringia, the Nightingale grows accustomed by degrees, but, as might be expected, from the circumstance, that their stomachs are not naturally adapted to vegetable food, at last dies of decline. There are besides many complicated receipts for Nightingale's food, but they are all more or less noxious, and need not be repeated here; while, on the contrary, the amateur who conforms his practice to the directions given above, may rely upon having healthy birds and good singers.

I have also tried the experiment of allowing the Nightingale the range of the aviary with the other birds. Under these circumstances they have eaten the common universal paste; but it does not seem to be sufficiently nutritious for them, as, after a few months, they fall into a decline and die, if not fed again with Nightingale's food. They also require a daily supply of water for drinking and bathing.

Breeding.—Each Nightingale in spring occupies and defends its own station, which in pairing time often occasions very violent contests among the males. And as the young birds generally return to the place where they have been bred, these combats are frequently carried on between parents and children; and all the ties of relationship, which were once so strong, are entirely forgotten.

The Nightingale builds its nest in groves or gardens, in some thick bush, or heap of sticks, or even on the ground, if the spot be surrounded with brushwood or long grass. It is carelessly built of small dry twigs and leaves, with an inner layer of grass stalks and roots, and sometimes lined with hair.

The female lays five or six greenish brown eggs, which *she* hatches in a fortnight. The young, which, to avoid the attacks of various animals, hop out of the nest before they can fly, are fed with small moths and caterpillars. Before the first moulting they have no point of resemblance to the old birds, except the red tail; for the upper part of the body is rusty grey; the head and wing coverts are spotted with yellowish white; and the under part of the body is rusty yellow, with dark brown spots on the breast. After moulting, they can scarcely be distinguished from the old birds, except by the presence of a scattered yellow feather, or spot, on the back of the head and neck, or near the beak and eyes. If this characteristic be wanting, the possessor of the bird must wait. Should it prove a young male, he begins to sing, or, as bird-fanciers call it, to record. Even this sign is not quite satisfactory, as the young females also record, and continue to do so until April; though their song is neither so loud nor so sustained, and is unaccompanied by so visible an inflation of the throat.

The following remarks may be useful to those who wish to try the experiment of rearing a young Nightingale from the nest. In a brood the lighter coloured birds are always the males; which again may be known by their white throats. The females are darker, or rather redder and browner. They are to be fed on ants' eggs, and soaked and grated bread. The males begin to record before their tails are grown. If the old birds be taken with the brood, they will continue to attend to the young. The Nightingale may occasionally be induced to breed in confinement, if a healthy and well-bred pair be allowed the sole possession of a room well filled with green pine branches.

Diseases.—The Nightingale rarely passes through the moulting season without some symptoms of indisposition; the best remedy for which is a spider or two, and a supply of good food. When suffering from disordered stomach they puff up their feathers, and sit with half-closed eyes, and heads under their wings, for hours at a time. They will be relieved by ants' eggs, a spider, or a little saffron in their water sufficient to give it an orange tinge. The diseases to which Nightingales are subject, in common with other birds, may be treated in the manner mentioned in the Introduction. It is necessary to

remove the scales from their legs and claws every three months—an operation which must be performed with the greatest care. They will live fifteen years in confinement; though it is rare that a wild bird can be observed in one spot for so long a period, a fact which may be accounted for by the depredations of fowlers and birds of prey. An instance is indeed recorded of a Nightingale which was in the possession of its owner for twenty-five years. After the sixth year it is observed that they sing less frequently and pleasantly; and it is therefore the most humane course to set them at liberty in May. The fresh air, and the consciousness of liberty, have been known so to invigorate old birds as to restore all the strength and beauty of their song.

Mode of Taking.—In the early spring, and especially at the pairing season, the Nightingale may be caught with very little difficulty. All that is necessary is to make a shallow trench in some dark-coloured soil, and place in it a few ants' eggs or meal worms. The simplest contrivance—a few limed twigs, or a falling-net adjusted on two cross sticks—is sufficient to entrap the simple bird, which will even watch the fowler set the trap, and hop into it before his back is turned. Even if it be not perched within sight of the spot, it may be driven to it with a little care and caution. It is thus easy for an expert fowler to depopulate a whole district of these delightful songsters—though at the same time his operations may be anticipated, by catching the birds and again setting them at liberty; a proceeding which makes them very shy and cautious in future. In many parts of Germany it is forbidden, under a heavy pecuniary penalty, to catch Nightingales under any pretext whatever; and in districts where this is not the case, only certain privileged persons are allowed, under fixed restrictions, to take or sell them. They may also be caught in nooses, baited in spring with live meal worms instead of berries; though this method is liable to the disadvantage that, however firm the nooses may be, the bird is almost sure to injure its feet in its struggles for freedom.

Attractive Qualities.—The chief recommendation of the Nightingale is, of course, its voice, which I will endeavour to describe as exactly as possible. It expresses its various emotions and desires in different notes. The least significant of them seems to be the simple whistle, *Witt!* but if the gut-

tural syllable *Krr!* be added, as *Witt Krr!* it is the call, by which the male and female mutually invite one another. The expression of displeasure or fear is the syllable *Witt*, repeated several times; and, at last, followed by *Krr!* That of pleasure and content, either with its food or mate, is a sharp *Tack!* like the sound produced by striking the tongue smartly against the roof of the mouth. In anger, jealousy, or surprise, the Nightingale, like the Black-Cap and others of its species, utters a shrill cry, resembling the call of the Jay, or the mew of a cat. This may also be heard in the aviary, when a bird, by the use of it, endeavours to interrupt and confuse a rival in the midst of his song. And, lastly, in the pairing season, when the male and female entice and pursue one another through the trees, they utter a soft twittering note.

Such are the tunes which both sexes are able to produce; while the song, the variety and beauty of which has raised the Nightingale to a pre-eminence over all other singing birds, is the prerogative of the male alone. The bystander is astonished to hear a song, which is so sonorous as to make his ears tingle, proceed from so small a bird, and his astonishment is not lessened when he discovers that the muscles of the larynx are stronger in the Nightingale than in any other singing bird. But it is not so much the strength, as the delightful variety and ravishing harmony of the Nightingale's song, which renders it the favourite of every one who has not altogether lost the sense of the beautiful. Sometimes it dwells for a minute or more on a passage of detached mournful notes, which begin softly, advance by degrees to a forte, and end in a dying fall. At other times it utters a rapid succession of sharp sonorous notes, and ends this, and the many other phrases of which its song consists, with the single notes of an ascending chord. There are, of course, various degrees of proficiency in the Nightingale, as in other birds; but in the song of a good performer have been enumerated, without reckoning smaller distinctions, no less than twenty-four separate phrases, capable of being expressed in articulate syllables and words. I have noted down the following notes of the song of one which is considered an admirable singer.* Could we penetrate into the

* *Vide* Introduction—*Voice and Song of Birds.*

hidden meaning of these sounds, we should doubtless find that they expressed the secret feelings of the singer. All over the world, from Sweden to Hindostan, the Nightingale's song is essentially the same; though, as I have before said, some are manifestly superior to others, both in the perfectness of their song, and the quality of their voice. One utters its notes with a slow and sweet mournfulness; another's tones are peculiarly clear and sonorous; a third introduces into its song original passages of its own; and a fourth surpasses all the rest in the silvery quality of its voice. Occasionally, however, birds may be found which seem to unite all these excellencies; and these are generally from the first brood of the year, which have been reared in some spot where Nightingales have abounded, and have learned to unite in their song the characteristic beauties of each. When the males return from their migration, which they generally do six or eight days before the females, they sing for some time before and after midnight, to attract the females, who in clear nights may be pursuing their journey. So soon as this purpose is accomplished they cease to sing by night, though some continue to begin their song a little before sunrise, and warble it at intervals throughout the day. There are, however, Nightingales which always sing in the middle of the night, and are hence called Nocturnal Nightingales;* but it cannot be decided to which class a bird belongs till he has occupied his position for some days, and enjoyed the society of his mate. After many years' experience, I have come to the conclusion that the Nocturnal and Diurnal Nightingales are different species, which propagate themselves regularly. A young bird, the father of which is a Nocturnal Nightingale, will, after the first year, become so too, under any circumstances; nor, on the other hand, does it seem possible for a Diurnal Nightingale to acquire the habit of singing by night. I have also remarked that the night singers seem to prefer mountainous districts, while the Diurnal Nightingales

* We must distinguish between the Nocturnal Nightingales and those which are termed Mopers. The former sing uninterruptedly throughout the night; the latter occasionally utter a few broken, unconnected passages. All Nightingales become Mopers after they are five or six years old, and are then often mistaken for night-singing birds; while, on the contrary, the true night-singers are generally Mopers for a year or two after they are caught.

frequent gardens, valleys, and the banks of streams; and to such an extent do I believe this distinction to exist, that I venture to assert it is only by accident if a night singer be found in the plains. They are, for instance, not uncommon on the borders of the Thuringian Forest, near Wallershausen; while, on the contrary, only the diurnal singers are found in the level country near Gotha.

It is a pity that the period during which the Nightingale sings is so short; as even in a wild state it sings only for three months, and not with equal vigour during the whole of that short time. It is heard most frequently from the time of its arrival till the young birds break the shell; after that period it sings less, and with less energy, as its principal attention is necessarily directed to the feeding of its brood. About midsummer its song ceases altogether, and one hears in the woods only the twittering of the young birds, in their attempts to acquire the paternal song. In confinement, birds which have been taken when old, begin to sing as early as November, and do not become entirely silent till Easter. The young birds, however, which have been reared from the nest, will sometimes, if placed under good instruction, sing for seven months in the year. If not hung where they can hear a good singer, they never acquire their natural song perfectly, but intermix with it notes of other birds; while, on the other hand, if possessed of a good voice and memory, they sometimes improve upon the instructions of their teacher. This, however, is a rare occurrence, as out of twenty young birds reared in the aviary, it is doubtful if even one prove a thoroughly good singer. The best are those which are caught in August, just before their migration, and which, in the following spring, are put under the tuition of an accomplished singer.

Those which are caught in spring, and are desired to sing the same season, should be well fed, and hung in a solitary and quiet spot. The cage should also be kept covered with a thin green cloth, or green boughs. I must not forget to add a word in reprobation of the barbarity of those persons, who, in order to enjoy for a longer period the song of this delightful bird, are cruel enough to deprive it of sight.

It is said, that the male Nightingale and female Redbreast, if allowed the full range of the aviary, will sometimes breed. My own experience does not bear out this assertion.

By way of conclusion, I will add the beautiful, if somewhat exaggerated description, of the Nightingale's song, given by BUFFON, in his *Natural History* :

"The name of the Nightingale," says he, "recalls to the memory of every man who has not lost the capacity of simple and natural enjoyment, the remembrance of some beautiful spring night, when the sky was clear, the air tranquil, and nature lay in expectant silence, as he listened enraptured to the songstress of the grove. Several birds may be mentioned, whose song in one or more respects deserves to be compared with that of the Nightingale. The Lark, the Siskin, the Chaffinch, the Whitethroat, the Linnet, the Goldfinch, the Blackbird, the Solitary Thrush, the American Mocking-Bird, are all heard with pleasure as long as the Nightingale is silent. Some of these have as beautiful a tone; others as soft and pure a warble; others, again, as sustained and melancholy a note as she; but it is in the union of all these excellencies, and the astonishing variety of her song, that the Nightingale bears away the palm from them all; so that their most perfect performance appears only a detached and incomplete portion of hers. She is always enchanting, and never repeats herself slavishly; for every repetition of her song is varied by a fresh accent, and embellished with new grace. When this Queen of the Spring begins her hymn to Nature, she commences with a half-fearful prelude, in low, undecided notes, as if trying the capabilities of the instrument, and intent on arresting the attention of the hearers. By degrees she becomes more decided; her courage and her inspiration increase, and soon the full harmonies of her incomparable throat are poured forth; sonorous bursts, light hovering shakes and trills, in which ease and purity are united; a subdued inward murmur, whose place in the scale the ear seeks in vain, but which is all the better adapted for a back ground to the clear distinct notes; runs, as rapid as lightning, uttered with amazing power, and often even with a tasteful ruggedness; mournful cadences, hardly separable from one another, yet full of expression; enchanting, penetrating tones, the veritable sighs of love and pleasure which rush from the heart, and speak to the heart, so that the heart overflows with emotions, and sinks in delightful languor. In the passionate tones, it is as impossible to mistake the expression of the feelings of the happy husband, as not to detect in the more

artful, though perhaps less expressive strains, the desire to entertain and please his mate, or to celebrate his victory over some jealous rival of his happiness and fame. The various passages are interspersed with pauses, which greatly enhance the effect of the following harmony. The notes already heard are enjoyed again in the echo which hovers about the ear, undisturbed by any new impression; and if the admired passage be not repeated, when the bird recommences her song, it is replaced by another so beautiful, as to efface the wish for the repetition of the first. One chief reason, indeed, as MR. BARRINGTON remarks, why the Nightingale surpasses all other birds in her song, is, that she sings in the night, when her voice is not only at the highest pitch of strength, but is rivalled by no other; while she far excels all other birds at any time, in the flute-like quality of her voice, and in the uninterrupted duration of her warble, which sometimes lasts for twenty seconds.

"The same observer enumerates sixteen different strains, distinguished by their closing syllables; but in other respects tastefully varied by the feathered performer. It is also ascertained that the song of the Nightingale may be heard at the distance of a mile, which is at least as far as the human voice can reach. The possession of so powerful an organ by a bird which hardly weighs half an ounce, is sufficiently striking; and it has been observed by HUNTER, that the muscles of the larynx in this bird are proportionally stronger than in all others, and stronger in the male than in the female. ARISTOTLE and PLINY assert that at the time when the trees begin to grow green, the Nightingale sings for fourteen days and nights uninterruptedly. This must be understood to apply only to wild birds; and cannot be taken in a literal sense; as they sing both before and after the period mentioned, though not with the same energy and spirit. They generally begin to sing in April, and end in June, about the summer solstice; though the exact time at which their song ceases, is that at which the young ones chip the shell, and the parent birds are warned by an impulse of nature to provide for their nourishment. Nightingales in confinement sing for nine or ten months in a year; and their song is not only more constant, but more perfect; from which fact MR. BARRINGTON draws the first and probable inference, that in this and many other species, the male does

not sing either to amuse the female, or relieve her fatigue during the long period of incubation. In fact, the female performs this office from a natural emotion or longing, which is more powerful than love. While engaged in it, she seems to experience a peculiar feeling of content, of which we can form no conception, yet which in any case should prevent us from imagining that she stands in need of consolation. And as, therefore, it is not from duty that the female sits, we cannot suppose that the song of the male has any reference to her emotions; indeed, it is observed that he does not sing while the second brood is being hatched.

"It is love, and especially the first season of love, which inspires the song of these birds. The spring awakes in them the desire of love and the desire of song at once; the males are the most ardent, and therefore sing the most, and if placed, as in an aviary, where they are unable to satisfy their sexual desires, and so extinguish at the same time the love of song, will sing through the greater part of the year. Instances are known of Nightingales which put forth the full beauty and power of their song, within a few hours after having been caught. These are, however, rare cases, and may feel very acutely the loss of their liberty; they would starve themselves to death if their food were not crammed down their throats, or injure themselves against the roof of their cage, were not their wings tied; though at last the desire to sing, supported by more powerful desires, conquers, and they become partially reconciled to captivity.

"The song of other birds, the tones of an instrument or of the human voice, seem to have a powerful and exciting effect on the Nightingale; they approach hastily, as if attracted by the agreeable sounds. From the fact that a duett seems to have greater charms for them than a solo, it might be inferred that they are not destitute of the sense of harmony. They do not listen in silence, but strive with their rivals, and try by every possible exertion not only to overpower them, but to drown every noise, of whatever kind. It is said that some have been known to drop down dead, having overstrained their vital powers in these contentions; and I have heard of one, which, when a Siskin near it began to sing, would not cease to utter an angry twittering till she had reduced the offender to silence.

So true is it, that not even conscious and acknowledged superiority is always free from jealousy."

All Nightingales do not sing equally well; some, indeed, are such poor performers, as not to be worth the trouble of keeping. It has also been remarked that the Nightingales of one district surpass those of another; and these differences, the cause of which is not always easy to discover, have been not inaptly compared to various dialects of the same language. In England the Nightingales of Surrey are preferred to those of Middlesex; and the Chaffinches of Essex, and the Goldfinches of Kent, are believed to possess peculiar excellencies. It is possible that the Nightingale is often excited to rivalry, and to practise and perfect her own song, by hearing the song of the other birds; and it is matter of experience, that these peculiarities thus acquired, are transmitted from one generation to another. At the end of June the Nightingale ceases to sing, and her only note is a kind of harsh cry, in which it is impossible to recognize the qualifications of the accomplished songstress. She is, indeed, at this time so changed in both voice and plumage, as to preclude our astonishment at the fact, that in Italy she is known under these circumstances by a different name.

SWEET'S ACCOUNT.—"This is a very interesting species, and deservedly esteemed for its song, which surpasses that of all other birds, from its variety of notes; it also sings the greater part of the night, as well as by day. In its wild state, it frequents woods, copses, and gardens, where it is often heard, but seldom seen. It generally visits us about London, the beginning of April; in Somersetshire it seldom arrives till the middle or latter end of that month, sometimes not till the beginning of May; some counties it does not visit at all. Its food consists entirely of insects of various sorts, but it prefers the eggs of ants to any other; it is also very fond of the young larvae of wasps, or hornets, as I believe are all the species of this genus; but these they can only get when procured for them. In confinement, they will soon take to feed on bruised hemp seed and bread, mixed together—if a few insects be stuck on it; they are also fond of fresh raw meat, but prefer the lean part; the yolk of an egg, boiled hard, and cut up in small pieces, may also be given them in winter for a change, if insects cannot be procured; also a little boiled milk and bread; but the more insects they have given them, the better will be their health,

and the more they will sing. The larvæ of the cockchafer, or may-bug, which is sometimes very plentiful in grass fields, may be procured in great abundance, and kept in pots of turf earth through the winter, giving each bird one or two of a day, according as the stock holds out. This will keep them in excellent health. Common maggots also, in the larvæ or pupa state, they are very fond of, also spiders, earwigs, crickets, and various other insects.

"The Nightingale is easily taken in a trap. As it generally seeks its food in fresh ground, it is only to clear away a place, and stir up the ground a little, near where it sings or frequents, then set the trap near it, baited with a living insect, and it is almost certain to be caught. Birds caught early in spring, if put in an aviary with other tame ones, will sing in a few days; those caught the latter part of summer, will begin singing in November, if young ones; but the old ones will seldom begin till February. One that I caught in August, began singing in November, and left off again about the middle of December; at the end of the same month it begun again, and sung continually all day long against a Whitethroat, that strived with all its might to outdo it.

"I have had a female Nightingale which built a nest in the cage, in a little work-basket, put in on purpose; she laid three eggs, and sat on them till she was almost starved, as the male bird would not feed her; she then threw the eggs out, and broke them; both the male and female were only one year old birds; and I have no doubt but they would have bred in confinement, had they been kept together another season; but I parted with the female to a gentleman who particularly wished it. I have since had a female several years, but it has never attempted to build, which I believe is owing to its being an old bird when first caught. Some authors give it as their opinion that the female of this species sings, but I have never heard one make the least attempt, though I have frequently kept them several years."

WILLIAM KIDD, in the *Gardener's Chronicle*, gives the following directions how to feed fresh-caught Nightingales.—"The birds, when secured, are placed in a store cage, and quickly conveyed to the bird dealers in the Seven Dials. These worthies then proceed at once to 'meat them off.' This is accomplished thus:—Some fresh raw beef is scraped; and being divested of all fibrous substance, it is mixed into a soft paste, with cold water and hard-boiled yolk of egg. This is put into a large bird pan. In the middle of this food is placed a very small inverted liqueur glass, with the stem broken off. Under this glass are introduced three

or four lively meal worms, whose oft-repeated endeavours to break out of prison attract the attention of the Nightingale. Not understanding how these worms are placed beyond his reach, he continues to peck at them, until by degrees he tastes the beet and egg, which is artfully rubbed over the sides of the glass. This being palatable, he satiates his appetite with it, and soon feels a zest for it—particularly as his attempts to get at the meal worms always prove abortive. He now eats regularly—he is meated off."

146. THE GREATER NIGHTINGALE.

Motacilla or *Sylvia Luscinia Major*, LIN. *Grand Rossignol*, BUF. *Der Sprosser*, BECH.

Description.—This bird, though usually held to be only a variety of the Common Nightingale, differs from it in so many respects, as to prefer a valid claim to be considered as a separate species. In the first place, it is, as its name denotes, a larger bird, being six inches and a half in length, of which the tail measures two inches and three-quarters. Secondly, its head and beak are larger; and thirdly, its colour and song are both quite distinct. It must be confessed that it bears a close resemblance to the Nightingale in disposition, behaviour, and gait; but this is also the case with the Blackcap and the Fauvette, which, nevertheless, have never been looked upon as varieties of that bird. The upper part of the body is a dirty greyish brown; the throat white, bordered with blackish grey; the breast light grey, with spots of a darker shade. The belly is dingy white, the wings dark brown; the pen feathers edged with dirty rust-colour. The tail is broad, and, as well as the rump feathers, a dirty rusty brown, which, in common with the rest of the plumage, is of a darker hue than in the preceding species.

Observations.—The difference in song between the Common and the Greater Nightingale is very distinct. The voice of the latter is stronger, more hollow, and sonorous; its song is slower and less unbroken, and possesses neither the “long drawn-out” sweetness, nor the harmonious chord-like endings of that of the Nightingale. On this account it is often compared with the songs of the Missel and Common Thrush, though preferable to them, in the purity and roundness of its tone. In force its song is superior; in variety and delicacy, inferior

to that of the Common Nightingale. This bird, however, possesses the advantage of being generally a night-singer, a peculiarity which, though highly valued in the Common Nightingale, is by no means universal. Its song is so sonorous, as to be hardly pleasant in a room, and it is therefore advisable to hang the cage outside the window. Its call is also different from that of the Common Nightingale, being *Hee glach arrr!* or, according to some, David and Jacob (*Daveet, Jakob*).

The Greater Nightingale is never found in Thuringia. It may occasionally be seen in Silesia, Bohemia, Pomerania, and in the neighbourhood of Wittenbergh, Halle, and Dessau; and in many parts of Austria, Poland, and Hungary, is of more frequent occurrence than the Common Nightingale. They are usually brought into Saxony from Vienna, and are therefore generally known by the name of Vienna Nightingales. Those from Hungary are preferred to the Polish ones. The characteristic by which they are distinguished is, that the former utter the call, *Daveet*, or *Jakob*, only once, while the latter repeat it several times in succession. In the neighbourhood of Thorn, and on the banks of the Vistula, where both species are common, the Greater, or Polish, is known by the name of the Saxon Nightingale.

The Greater Nightingale generally frequents groves and thickets, especially in the neighbourhood of water. In confinement they thrive on the same food as the Common Nightingale, but are not so delicate, and live longer. The nest resembles that of the Common Nightingale, but the eggs are larger, and clouded with olive brown. The Greater Nightingale may be caught in the same manner as the preceding species, and is subject to the same diseases. Both at the moulting season, and in October and November, it is very delicate, and needs an occasional spider or woodlouse, as a restorative. The best remedy, however, is a drop or two of the Golden Tincture of Halle, mixed with its water.

147. THE BLACKCAP.

Silvia, or Motacilla Atricapilla, LIN. *Fauvette à tête noir*, BUF.
Der Mönch, oder die *Schwarzköpfige Grasmücke*.

Description.—This bird, which is surpassed by very few in the excellence of its song, is called in Germany the **Monk**,

from the cap which covers the top of the head. As in the male this cap is black, while in the female it is reddish brown, and as the latter is often the larger bird of the two, many bird catchers have fallen into the error of considering them two distinct species, which they denominate respectively, the Black-capped and Redcapped Warbler (*grasmüche*). The result, however, of the observations which I have made for many years on this bird, both in a wild state and in confinement, is, that the difference is only one of sex. It is about the size of the Linnet, being five inches ten lines in length, of which the tail measures two inches and a half. The beak is five lines long, shaped like that of the Nightingale, and horn blue, except in the inside, and at the root of the lower mandible, where it is white. The iris is chestnut brown; the feet dark grey, and ten lines in height. The top of the head is black; the cheeks and nape of the neck light grey; the upper part of the body and the wing coverts ashen grey, mottled with olive green. The under part of the body is light grey, inclining to white on the throat and belly; the sides and shanks are the same colour as the back; the vent and the under side of the wings are white, spotted with grey; the pen and tail feathers dark brown, edged with the colour of the back.

The female, as I have before remarked, is a little larger; the top of the head is yellowish brown; the upper part of the body reddish grey, tinged with olive green; the cheeks and throat light grey; the sides and shanks pale grey, with an olive green gloss; the belly reddish white; the pen and tail feathers dark brown, edged with the colour of the back.

The plumage of the Blackcap is very soft and silky, and it is rare to see one in the aviary, whether confined in a cage, or allowed to range the room, which has not injured its wing and tail feathers. I once caught a white variety of this bird, which, on the upper part of the body, was mottled with olive green.

Habitat.—The Blackcap is at home all over Europe, and frequents woods, or gardens at no great distance from them. It is especially fond, like the Nightingale, of the bushy under-wood. It begins to prepare for migration about the middle of September; and finally takes its departure at the end of the same month, returning in the middle of April, a few days before the Nightingale.

If allowed to run about the room, a pine bough, or a grating with several perches, should be placed for it in some warm corner; which it will rarely leave, as it is not fond of hopping about. It is, indeed, a very awkward bird, hopping with its belly almost touching the ground; and thrives better in a large cage, which may either be of the form of a Nightingale's cage, or bell-shaped.

Food.—The usual food of the Blackcap consists of caterpillars, flies, moths, and other insects, as well as their larvæ, though it sometimes eats cherries, elder-berries, and currants.

It thrives in confinement on the univeral paste, varied with a few meal worms and ants' eggs. It is a greedy bird, and if allowed the range of the room, soon learns to eat everything that comes to table. It has been known to live from twelve to sixteen years in good health, when fed with wheat-meal, and occasionally a little crushed hemp seed, especially if supplied with red and black elderberries from July to November. The same berries preserved by being dried, and when given to it soaked in water, conduce much to its health in the winter. Autumn is the time when it is generally caught, and a few elderberries and meal worms in the food-trough will soon induce it to eat the food of the aviary. It is fond of bathing, and requires a daily supply of fresh water.

Breeding.—The Blackcap builds in a hedge or bush, and seems to prefer the whitethorn for this purpose. The nest, which is firmly fixed to the bough, and hemispherical, is well built of hard grass-stalks and dry twigs, lined with softer grass-blades, and the hair of various animals. The female lays once, and sometimes twice a year, five or six yellowish white eggs, mottled with a darker shade of yellow, and spotted with brown. The young are fed with caterpillars and moths, or other winged insects; and the young males, if reared from the nest on bread and milk, not only acquire a very beautiful song of their own, but those also of the Nightingale and Canary. Before the first moulting the males and females are scarcely distinguishable except by the connoisseur, who may be able to detect a shade of difference in the colour of the back and top of the head. Immediately after that period the cap or crest of the male begins to assume its characteristic hue. The best method, however, to determine the sex of the young birds, is to pull out a few of the brown feathers of the head. If they

are replaced by black ones, the bird in question is undoubtedly a male.

Diseases.—The Blackcap is subject to the same diseases as the Nightingale, though, in addition, especially liable to be attacked by decline. As soon as the symptoms of this malady appear, the bird should be frequently fed on ants' eggs and meal worms, and a nail be allowed to remain in its water for a considerable period. If suffered to range the room, the Blackcap sometimes loses all its feathers, at other seasons than that of moulting. The best remedy for this, is to put the bird into a cage in a warm place, and feed it with good food. If the feathers do not seem inclined to grow, a lukewarm bath, repeated on two or three successive days, will probably aid their development. For epileptic or paralytic affections, a drop or two of olive oil is often an effectual remedy. I have just cured by this means a bird which a few weeks ago had entirely lost the use of one leg, but is now quite lively, and in full song.

Mode of Taking.—The Blackcap may be caught in July and August in springs, baited with currants; in September, with elderberries; and which should be so arranged as not to hurt the bird's feet. It is very suspicious, and even if hungry, will often hover about the bait for half an hour, before it will touch it. The same may be remarked in the case of the water-trap; however favourite an article of food the bait may be, it will fly away and back again a dozen times, though confident enough if it sees another bird bathing or drinking. The young birds, before the first moulting, are very fearless, and may be caught in considerable numbers. In spring they may be taken, like the Nightingales, in nets and on limed twigs, set on a spot cleared of moss and grass, and baited with meal worms.

Attractive Qualities.—In the villages of the Thuringian forest the Blackcap is a very favourite bird, preferred by some even to the Nightingale. If its song have less volume, and be not so articulate as that of the Nightingale, it is far purer and more flute-like in its tone, more connected, and equally various. In confinement it sings throughout the year and almost all day; in a wild state, of course, only during the summer; though it may be heard late in the evening, like the Nightingale, and recommences its song before daybreak. The female also, as is the case of the Nightingale, sings a little; a fact which may

have given rise to the idea, that it was a separate species. Its call is a sharp *Tak!* repeated several times: and when surprised or afraid, it also utters a loud unpleasant cry, like that of a hurt cat.

SWEET'S ACCOUNT.—“One of the finest songsters that visits the British islands, the Nightingale excepted. It generally visits us at the end of March or the beginning of April: the earliest that I ever observed, was the 25th of March; the same day I saw, for the first time this season, a *Redstart*, a *Swallow*, and a *Snake*. I have sometimes known a solitary male bird of this species arrive, and sing every day for a fortnight, before any other was to be seen; I have also seen one as late as the 15th of October.

“The song of the Blackcap is very loud and agreeable, and it has a great variety of notes; it is also a real mock-bird, and will catch the note of any bird that it chances to hear sing. I have heard it imitate the Nightingale so exactly, that it has deceived me; also the Blackbird, Thrush, and the Greater Pettichaps, all of which it imitates so much in its voice, that it is almost impossible to detect it, except when it runs from one into the other, or shows itself on the open part of a tree.

“In a wild state, this species feeds chiefly on fruit and berries of various sorts; it is also very fond of many sorts of insects, such as caterpillars, butterflies, spiders, &c. It is not very difficult to take, in a trap baited with a cherry, or living butterfly, or a green caterpillar; it will soon become familiar in confinement, and will readily take to feed on the bruised hemp seed and bread, if some currants, raspberries, or other small fruit, be stuck in it. To have it always in perfect health, it is requisite that some kind of fruit, or berries, be always kept in its cage; any sort of fruit, or berry, that is eatable, or wholesome, may be given it in the winter, *privet-berries*, and slices of a mellow apple, or pear, or a roasted apple; also a few flies, or spiders, occasionally.

“In confinement, this bird will sing the greater part of the year, and will soon take to sing after being caught; I have known one caught in April, to begin singing the next morning; but it was hung near some other birds. This was the first species of the genus that I attempted to keep through the winter; and I was several seasons before I could manage it well; but as soon as I found out that it would feed on the bruised hemp seed and bread, my difficulty was at an end; and I had no doubt but all the other species would feed on the same sort of food; this proves to be correct, as far as I have had an opportunity of deciding.

“The female of this species sings in confinement, but its note is

quite different, and not so agreeable as the male. It has now been in my possession nearly six years; the first three years it did not sing, but since that time it sings frequently."

148. THE FAUVETTE, OR PETTICHAP.

Sylvia, or Motacilla Hortensis, LIN. *Fauvette*, BUF. *Die Graue Grasmücke*, BECH.

Description.—The Fauvette is somewhat smaller than the Blackcap, being five inches in length, of which the tail measures two inches and a half. The beak is five lines long, of the same shape as the preceding species, and horn-brown, except on the upper mandible; on the lower, light lead colour, and whitish inside. The iris is greyish brown; the feet strong, lead-coloured, and three quarters of an inch in height. The upper part of the body is reddish grey, with a very slight tinge of olive brown; the cheeks are somewhat darker, and a white stripe surrounds each eye. The breast and sides are pale reddish grey; the belly white, with a tinge of reddish grey on the rump; the knees are grey; the wings and tail greyish brown, edged with the colour of the back, and tipped with white; the lower wing-coverts reddish yellow. In the female the breast is a little lighter; but, in other respects, she resembles the male.

Habitat.—This bird, which is found in all parts of Germany, frequents groves, gardens, or the outskirts of large forests. It is a bird of passage, arriving a few days before the Nightingale, and departing about the end of September. In confinement it may be treated like the foregoing species, though, being a more delicate bird, it is advisable to keep it in some kind of cage.

Food.—Throughout the spring the Fauvette feeds upon caterpillars and other insects, which it picks off the trees and bushes; though, when the cherries are ripe, its depredations on them are so constant as to give its beak a prevailing red hue. It also eats currants and red and black elderberries.

In confinement the Fauvette is a greedy bird, and if fed with Nightingale's food, will pass whole days at the trough. Although more easily tamed than the Blackcap, it is a more delicate bird, and rarely lives beyond three years. It will eat the first universal paste; though if this be given to it unmixed with anything else, its feathers begin to fall off, and the bird perishes of cold.

Breeding.—The Fauvette builds its nest in hedges and bushes, about a yard from the ground, and seems to prefer for that purpose the black or white thorn. I have also occasionally found it in the thickest part of a pollard lime. It is well built of strong grass stalks and root fibres, lined with a layer of finer stalks, or sometimes of moss. The opening of the nest has a border of spiders' web, or of silk from the cocoon of some insect; and, like the Swallow, the Fauvette lays the foundations of several nests before finding a situation quite to its mind. The female lays four or five yellowish-white eggs, spotted with light grey and olive brown. The young are hatched in about a fortnight, and begin to leave the nest as soon as their feathers appear.

Diseases.—The Fauvette is subject to the same diseases as the Blackcap, except that its feathers fall out even more frequently, and from a greater variety of causes. If fed with the first universal paste, it frequently dies of surfeit.

Mode of Taking.—In July, August, and September this bird may be caught with springes, baited with cherries, currants, and red or black elderberries. It may also be taken, without difficulty, in the water-trap, especially from seven to nine A.M., or in the evening, just before sunset.

SWEET'S ACCOUNT.—“The present species, whose colours are not so gay as some of the others, is nevertheless a plump, handsome-shaped bird, and its song is scarcely to be surpassed by any of the genus, the Nightingale excepted. It first visits us in the spring, about the latter end of April, or the beginning of May; and its arrival is soon made known by its very loud and long song. It generally begins very low, not unlike the song of the Swallow, but raises it by degrees, until it resembles the song of the Blackbird, singing nearly all through the day, and the greater part of the time that it stays with us, which is but short, as it leaves us again in August. In confinement, it will sing nearly all through the year, if it be treated well. In a wild state, it is generally found in gardens and plantations, where it feeds chiefly on fruit, and will not refuse some kinds of insects; it is very fond of the larvæ or caterpillar, that is often found in great abundance on cabbage plants, the produce of *Papilio Brassica*, and I know no other bird of the genus that will feed on it. Soon after its arrival here, the strawberries are ripe, and it is not long before it finds them out; the cherries it will begin before they are quite ripe; and I know not any kind of

fruit or berry which is wholesome, that it will refuse ; it generally tastes the plums, pears, and early apples, before it leaves us : and when in confinement, it also feeds freely on elder, privet, and ivy berries ; it is also partial to berberries, and a soft apple or pear.

" These birds are not so easily caught as some of the other species ; they are more shy of getting into a trap ; but in gardens where they are plentiful, they may be taken occasionally in a Nightingale-trap, baited with a ripe cherry or raspberry, or a living butterfly or caterpillar pinned on. They will readily take to feed on the bruised hemp seed and bread, or on bread and milk ; they are also fond of fresh raw meat, both fat and lean, also the yolk of an egg occasionally. To bring them to eat it directly, a few currants or raspberries, or other small fruit, must be stuck in it ; in eating these out, they taste the other food, which they prefer to the fruit at first, for a change. Fruit of some kind or other, should, if possible, be always kept in their cage. In winter they are very fond of a roasted apple ; and as soon as the berries of the ivy are ripe, they should be supplied with some ; they will then succeed very well.

" This species builds its nest on trees or high shrubs, from ten to twelve feet above the ground ; it is generally very deep, but thin, and composed of dry grass. It is not so tender as I formerly supposed ; one that I have now kept nearly six years, never seems to mind the cold at all. I have kept females of this species, and also of both species of Whitethroats, for several years, but none of them ever attempted to sing."

149. THE WHITETHROAT.

*Motacilla, or Sylvia Cinerea, LIN. Le Fauvette Grise ou Grisette, BUF.
Die Gahle Grasmücke, BECH.*

Description.—This slender and elegantly-formed bird is five inches and a half in height, of which the tail measures two inches and three quarters. The beak is five lines long, blackish on the upper mandible, on the lower grey, and at the corners, and in the inside, yellow. The iris is greyish brown ; the feet ten lines in height, and brownish flesh-colour. The head is grey ; the cheeks, neck, back, rump, tail-coverts, and smaller wing-coverts, are grey, tinged, especially on the back, with brown. The throat and the belly are a beautiful white ; the breast, sides, and vent feathers, are white, tinged with reddish flesh-colour. The wings are dark brown ; the larger and the hinder wing coverts having a broad border of rust colour, which appears, indeed, to be the general hue of the wings when folded. The tail is dark brown ; the outermost feather having a large

white wedge-shaped spot; the next a smaller spot of the same shape and colour; and the third being tipped with white.

In the female, which is somewhat smaller, the rust colour of the wings is lighter, and the beautiful white throat is altogether wanting.

Habitat.—This bird, which is at home all over Europe, may be seen about the middle of April, in thick bushes, groves, gardens, or the outskirts of extensive forests, creeping through the grass and underwood with great rapidity. It is a bird of passage, leaving us at the end of September, or the beginning of October. In confinement it may be treated like the last-mentioned species, though still more delicate. The best plan is to rear it from the nest, keep it in a Nightingale's cage, and treat it in every respect like that bird.

Food.—In a wild state the Whitethroat picks off the trees all kinds of insects and their larvæ; and, when deprived of this kind of food by the severity of the weather, betakes itself to berries of different species. In confinement it should be fed on the Nightingale's food, and occasionally a little barley meal with bread and milk. It thrives best if in summer red elderberries, and in winter dried black elderberries, which have been soaked in water, be now and then mixed with its food.

Breeding.—The Whitethroat builds its nest in thick underwood near the ground, among roots of trees which have grown above the surface on the banks of brooks and rivers, or even in tall grass. It is loosely put together of grass stalks and moss, with a lining of horse-hair. The female lays five or six greenish white eggs, spotted with olive green and dark ashen grey. The young birds, which soon leave the nest, are like the parents, except that the rust-coloured border of the wings is not so distinct; a peculiarity which is more marked in the females than in the males, and affords, therefore, a criterion by which the sexes may be distinguished. They may be easily reared with ants' eggs, and become, in time, so tame as to sing when perched upon their master's hand.

Diseases.—The Whitethroat is subject to the same diseases as the Blackcap.

Mode of Taking.—At the end of the summer, and in autumn, this bird may be taken without difficulty in nooses baited with currants and elder-berries; though it must be confessed that

the easiest and surest method is to set the nest with limed twigs. It is shy of the water-trap.

Attractive Qualities.—This is an exceedingly lively and cheerful bird, whose agreeable song may often be heard in the open air till a very late hour in the evening. It is, however, necessary to pay particular attention in order to hear it, as it consists of a very long piano passage, concluded with a short forte one. This last is shrill, and consists of several arpeggios given with great distinctness; at the end of which the bird makes a short circuit in the air, and returns to its perch. Its call is *Tzæ!* If its cage be so hung that the bird is not silenced by the louder notes of others, its song will be found to be exceedingly melodious.

SWEET'S ACCOUNT.—“A very lively and interesting species, and one of the easiest preserved; its song also, in my opinion, cannot be surpassed by any bird whatever; it is both lively, sweet, and loud, and consists of a great variety of notes. One that I at present possess, will sing for hours together, against a Nightingale, now, in the beginning of January, and it will not suffer itself to be outdone. When the Nightingale raises its voice, it also does the same, and tries its utmost to get above it; sometimes, in the midst of its song, it will run up to the Nightingale and stretch out its neck as if in defiance, and whistle as loud as it can, staring it in the face; if the Nightingale attempts to peck it, away it is in an instant, flying round the aviary, and singing all the time.

“In a wild state, the present species generally visits hedges and gardens; it arrives in this country about the middle of April, and is often heard singing in a thicket, or in the middle of a hedge; sometimes it mounts up in the air a little way, or flies from one hedge to another, singing all the time. It is readily taken in a trap, baited with a living caterpillar or butterfly. One that I caught last spring, sung the third day after being in confinement, and continued to sing all through the summer; but this was most likely in consequence of a tame one being with it, which also sung at the same time.

“In their native state, these birds feed chiefly on small insects, and a few sorts of fruit, strawberries and raspberries in particular; they are very partial to the different species of *aphis*, with which almost every tree is covered some time or other in the summer; they are also very fond of the smaller species of butterflies, and the common house-fly (*musca domestica*); they soon take to feed on the bruised hemp seed and bread, and also on

milk and bread. I have known them to feed on it the day they were caught. Fresh meat, both fat and lean, they also like very well for a change, and the yolk of a boiled egg, also a wasted apple in winter ; they pick up a great quantity of small gravel, of which there should be always a constant supply in their cage or aviary ; if they are without this, they soon get unwell. Fresh water should also be given them every day, in a saucer or pan, large enough for them to get into, as oftentimes they wash themselves two or three times a day.

"I have now a fine male bird of this species, that I have possessed between eight and nine years ; it still continues as lively, and sings as well as ever ; it is a very desirable species, as it never seems to mind the cold, and continues in song nearly all the year."

150. THE WHITE-BREASTED WARBLER, OR BABILLARD.

Motacilla Currula, or La Fauvette Babillarde, BUF. Die Geschwätzige Grasmücke, oder Dass Müllerchen, BECH.

Description.—The Babillard is not unlike the bird last described, in form and plumage, although smaller, and not so rust coloured on the wings. It is five inches in length, of which the tail measures two inches. The beak is five lines long, sharp, and black, except on the lower mandible, which is blue ; the iris has an outer ring of yellowish white, and an inner one of bright yellowish brown ; the feet are seven lines in height, and blackish blue. The head and rump are dark reddish grey ; the cheeks are somewhat darker than the head ; and the rest of the upper part of the body grey, slightly tinged with red. The under part of the body is white, with a reddish grey hue on the sides of the breast. The small wing coverts are light brown ; the larger wing coverts and pen feathers dark brown, edged with reddish grey ; the tail dark brown, the outermost feather having a wedge-shaped white spot, and the others bordered with reddish grey.

It is almost impossible to distinguish the female from the male ; though if both sexes be seen at once, it may be perceived that her head and feet are a little lighter in colour.

Habitat.—The Babillard is found in all parts of Europe, except in the extreme north, and in Germany is one of the commonest hedge birds. It is a bird of passage, arriving in the middle of April, and taking its departure in September.

It frequents gardens, especially if full of gooseberry bushes; and if seen in the woods, it is never on the high trees, but in the thick underwood.

In confinement it may be treated like the Fauvette, but is a very delicate bird.

Food.—This bird eats insects and small caterpillars, and, as we may conclude from the fact, that it arrives a week earlier than others of its species, insects' eggs also. It is also fond of currants and elderberries. In the aviary it may be fed with Nightingale's food, but will not live longer than a year, except well supplied with ants' eggs and meal worms.

Breeding.—The nest of the Babillard, which is usually found in thick gooseberry or white-thorn bushes, or young fir-trees, is composed of grass stalks, lined with swine's bristles and fine roots. The female lays five or six white eggs, spotted, especially at the thick end, with ashen grey and yellowish brown. The affection of the Babillard for its young, like that of all of its genus, is so great, that as soon as any one comes near the nest, the sitting bird drops out of the nest as if senseless, and flutters helplessly upon the ground, uttering an anxious twitter. No sooner, again, have the feathers of the young birds begun to grow, than they will spring out of the nest, and hide themselves in the bushes, if so much as looked at. They may be reared in the same manner as the young of the Fauvette.

Diseases, and Mode of Taking.—On both these heads the reader is referred to the account of the Fauvette. The Babillard—if snow should chance to have fallen—after its arrival in the spring, may also be taken in the following manner: A place near a hedge should be cleared, and set with limed twigs, baited with meal worms. To this, with the exercise of a little care and caution, the birds may be driven.

Attractive Qualities.—Although the plumage of this bird is not particularly brilliant, its general appearance is pleasing. Throughout Germany it is called the Little Miller, from some peculiar notes of its song, which resemble the noise of a mill, *Klap, klap, klap, klap!* It is commonly thought that this is the whole of its song; whereas in the variety and beauty of its notes, though very soft, and not very pure in tone, it surpasses all other warblers. While singing, it hops from twig to twig of the thick underwood, but pauses for a moment when it comes to the final clap: and gives it out with con-

siderable effort, and expanded throat. If hung in the aviary, at a distance from other birds, it is a very agreeable singer, as its harsh call is not often heard.

SWEET'S ACCOUNT.—“ This pretty little bird visits us about the middle of April, and leaves us again at the end of August, or the beginning of September ; its song is not so agreeable as many of the other species ; but, from its singularity, it makes a pleasing variety, being so very different from all the others ; in its wild state, it feeds principally on flies, and other small insects ; it is also partial to several sorts of fruit, such as cherries, plums, apples, pears, and grapes. In confinement it will soon become tame and familiar, and will readily take to feed on bread and milk, and also on bruised hemp seed and bread. One that I bred up from the nest, became so attached to its cage, that it could not be prevailed upon to quit it for any length of time ; when the door of it was put open, it would generally come out quickly, and first perch on the door, then mount to the top of the cage, from thence it would fly to the top of any other cages that were in the room, and catch any flies that came within its reach ; sometimes it would descend to the floor, or perch on a table or chair, and would come and take a fly out of the hand, or drink milk out a spoon, if invited ; of this it was very fond. As soon as it was the least frightened, it would fly immediately to its cage, first on the top, from thence to the door, and would enter in exactly in the same manner as it came out. I have often hung it out at the window, perched on the top of its cage, with the door open, and it would never attempt to fly away ; sometimes, if a fly should happen to pass near it, it would fly off and catch it, and return with it to the top of the cage ; after remaining there a considerable time, it would either return into it, or fly in at the window, and perch on the cages of the other birds. I sometimes have placed the cage with its door open in the garden, where the ants were plentiful ; it was always very shy of coming out, and would never venture far from it, and on being the least alarmed, it would return to it again.

“ I kept this bird through several winters, and the cold seemed to take no effect on it ; at last, a strange cat came into the room where it was, and pulled it out from betwixt the wires of the cage, without leaving a feather behind, it was so very small.

“ This elegant little bird is well worth keeping in confinement. I have at present a very handsome one, which is continually singing, and has a very pleasing soft note, much more pleasant than the wild ones ; they soon become much attached to their cage, and to the person who feeds them.”

151. THE BLACK REDSTART.

Sylvia or Motacilla Tithys, LIN. Ronge Queue, BUF. Der Wistling, BECH.

Description.—The Black Redstart is five inches and a half in length, of which the tail measures two inches and a quarter. The beak is five lines long, yellow inside and at the corners; black outside, and very sharp; the iris is dark brown; the feet black; the shanks ten lines high. The upper part of the body is a deep bluish grey; the rump red; the cheeks, throat, and breast, black; the belly and the sides like the back, but tinged with white; the vent a reddish yellow. The wing-coverts are blackish, bordered with white; the quill feathers dark brown, with a similar border; the hindermost especially, having a broad white edge, which forms a longish spot on the wings; the tail feathers are a yellowish red, with the exception of the two centre ones, which are dark brown.

The female is of a dirty ashen grey on the upper part of the body; on the under part, ashen grey tinged with red; the chin whitish, and the borders of the wings narrower than in the male, and reddish white.

The colour of this bird varies during the first eight years. The very old ones are black all over the wings and tail; coal black on the lower part of the body, but not quite so dark above. In extreme old age they become grey on the breast. A male of one or two years' old, is very like a female, being ashen grey on the upper part of the body, and on the under part reddish grey. The borders of the wings are more distinctly marked. After this period the colour gradually becomes darker. Many bird-catchers, and even authors, have imagined these varieties of colour, which are dependent upon age and sex, to be characteristic of a difference of species.

Habitat.—This bird is a native of all Europe, and the temperate regions of Asia. It prefers mountainous to level regions, and is frequently found on bare chalk hills, though also on rocks in the woods, and towns, and villages, perched on the highest buildings, towers, churches, castles, &c. In spring and autumn it frequents the hedges. It arrives from its winter quarters very early, as its song may be heard even in the beginning of March. In the middle of October it congregates in small flocks, and takes its departure. It has one peculiarity,

by no means common among singing birds—that it sings during the whole period it is with us, even in the coldest and stormiest weather. It may sometimes be heard piping its song, perched on a weathercock.

In a room it may either be allowed to run about, or may be confined in a Nightingale's cage.

Food.—When wild, this bird eats the flies on houses and stones, which the warmth of spring has enticed out. It also eats cabbage-caterpillars, and other insects, and in autumn elderberries.

If intended to be kept in confinement longer than a year, it must be fed like the Nightingale, and sometimes also on ants' eggs and meal worms. Old birds may sometimes be tamed in autumn, by putting elderberries among their food; in spring ants' eggs and meal worms are a good substitute. They have been known to live six years in a cage.

Breeding.—They build in rocks and holes of walls, but especially in lofty old buildings, on timbers of roofs, where the nest can stand alone on a beam or support. It is made of hair and hay woven together. The female lays six eggs, of a pure white colour, twice a year. The young are of a reddish grey, and must be taken out of the nest when the tail is half grown. They are to be fed on ants' eggs and wheaten-bread, softened in milk. They are subject to the same diseases as the Fauvette.

Mode of Taking.—Limed twigs, to which meal worms have been attached, are to be placed in any spot which they are observed to frequent. In autumn they may be taken in sponges before which elderberries have been hung.

Attractive Qualities.—From the red tail, and the call, *fitza*, both of which it has in common with the Nightingale, this bird has probably derived its name, "wall Nightingale." It cannot have been so called from its song—which, although peculiar, has no similarity to the various melody of the Nightingale. It consists of three parts, of which the middle is little better than a croak, though the upper and lower possess some high and clear notes. It sings from morning till night; its movements are light and nimble; whenever it sits down, it vibrates its tail from side to side, cries *Fitza!* and, which is the case with very few birds, is active till it is quite night, whether wild or in confinement.

ADDITIONAL.—The Black-breasted Redstart, or Black Redtail, as MACGILLIVRAY calls it, is a very rare bird in this country, not more than five specimens being mentioned by YARRELL as having been taken here. GOULD was the first British naturalist who recorded the capture of a specimen, which occurred in the neighbourhood of London, in October, 1849. The fifth specimen mentioned was shot near Bristol, while flying about with some Stonechats among furze. MUDIE calls this bird the Black Redstart, and WOOD the Tithys Warbler. TENNANT says that it inhabits the Morea; and STRICKLAND observes that it is common among the rocky shores near Smyrna, where it remains during winter. The Prince of Musignano, when at sea in the spring of 1828, about five hundred miles from Portugal, and four hundred from Africa, obtained a specimen, which was caught in the rigging of the ship, the wind at the time blowing strong from the east.

152. THE COMMON REDSTART.

Sylvia or Motacilla Phoenicurus, LIN. *Rossignol de Muraille*, BUF. *Das Gemeine oder Garten Rothschwätzchen*, BECH.

Description.—The Redstart is five inches and a quarter in length, of which the tail measures two inches and a quarter. The beak is five lines long, round at the point, black, except at the corners and in the inside, where it is yellow. The iris and the feet are black; the shin bones ten lines high. The insertion of the upper mandible and the cheeks are black; the throat black, spotted with white. The forehead is white, and a stripe of the same colour passes over the eyes. The back of the head and neck, the back and the lesser wing coverts, are dark ashen grey, tinged with red. The rump, breast, sides, and upper part of the belly are rust coloured, the last being clouded with white; the under part of the belly and the vent rusty yellow; the larger wing coverts, and their pen feathers, dark brown, edged with yellow; the tail rusty red, having the two centre feathers dark brown.

The female is very different, and resembles, except that its plumage is lighter, the female of the Black Redstart. The upper part of the body is a reddish ashen grey; the throat whitish, clouded, after the fifth or sixth year, with black. The breast is a dirty rust-colour, mottled with white; the belly dusky white; the rump reddish yellow. The larger wing coverts and the hinder pen feathers are edged with rust-colour.

This description applies to both males and females only after the first moulting. Before this the young males are marked with white on the back of the breast, a peculiarity which they lose in the ensuing summer. They have also a white stripe on the forehead ; and on the belly, are rather white than yellow.

Habitat.—The Common Redstart is a native of the same countries as the preceding, and may be met with all over Germany. It is a bird of passage, migrating to a warmer climate in the first half of October, and not returning till the end of March or beginning of April. In spring and autumn, it frequents, for some time, the hedges and low bushes ; in summer it may be found in gardens, near streams overshadowed with willows, in thickets, or even in the deepest woods. The Redstarts which inhabit gardens, frequently delight the inhabitants of towns with their morning and evening song.

In confinement they may either be allowed to range the room, or kept in a Nightingale's cage. They thrive, too, in a bell-shaped cage, and delight the eye with their beautiful plumage.

Food.—When wild, the Redstart feeds on various kinds of insects, earth worms, currants, and elderberries.

If allowed to range the room, they may sometimes in autumn be accustomed to the universal paste, by means of elderberries mingled with it, and an occasional meal worm. In spring the same may be accomplished by means of ants' eggs and meal worms. Being tender birds, ants' eggs and meal worms should be occasionally given to them ; but earth worms very rarely, as this is a food which does not agree with birds in confinement. When caged, they may be fed with Nightingale's paste. Three or four years is the longest period during which they can be preserved on this regimen. They generally die of atrophy.

Breeding.—The Redstart builds its nest, which is carelessly constructed, of grass stalks, feathers, and hair, in the holes of trees and walls, and under the eaves of houses. The female lays twice a year six or seven apple-green eggs. As soon as the tail feathers have begun to grow, the young birds hop out of the nest, and perch on some neighbouring branch, where they are fed by their parents till able to provide for themselves. Till the first moulting the whole of the body is ashen grey, spotted with white. In autumn the young females very closely

resemble the Nightingale, and are often mistaken for it. They may be reared with the least difficulty on ants' eggs, with which bread soaked in milk is gradually mixed, till they become accustomed to the paste. The Redstart is very ready to imitate the songs of other birds which it may chance to hear.

Diseases.—Diarrhoea and atrophy are the diseases most fatal to this bird.

Mode of Taking.—In spring the Redstart, like the Red-breast, may be taken by placing limed twigs in the hedges frequented by it. To these it must be gently driven. Like the Nightingale, it may also be attracted by meal worms. In autumn they may be caught, in considerable numbers, in gardens and groves, by a noose baited with elderberries. Those which are intended to be kept are best caught in sringes, of which the wooden part is covered with felt, to prevent injury to their legs. The birds of one year old are preserved with least difficulty. They may also be taken in the water-trap.

Attractive Qualities.—Not the beauty only, but also the liveliness and the song of this bird, render it a favourite. Its body is always in motion ; it never ceases to bow, and shakes its tail from side to side ; and all its movements are active and graceful. Its own song is pretty, and often enriched by notes borrowed from the songs of the neighbouring birds. One, for example, which has built near my house, imitates the song of a Chaffinch, whose cage hangs before my window ; and another, whose nest is in my neighbour's garden, repeats some of the notes of a Blackcap close by. The faculty possessed by the Redstart of appropriating to itself, even when at liberty, the songs of other birds, is very unusual.

It soon becomes tame enough to take meal worms from the hand.

SWEET'S ACCOUNT.—“This is a very elegant and interesting species, and a good songster its food is precisely the same as the last species ; in confinement it will sing by night as well as by day, if a light be kept in the room where it is ; it will soon get very tame and familiar in confinement, and will be much attached to the person that feeds it ; if brought up from the nest, it may be learned to sing any tune that is whistled or sung to it. One that I was in possession of some years back, learnt to sing the Copenhagen Waltz, that it had frequently heard sung, only it would sometimes stop in the middle of it, and say *chippit*, a name by which it was generally called, and which it would always

repeat every time I entered the room where it was, either by night or day. In winter it would generally begin singing in the evening as soon as the candle was lighted, and would often sing as late as eleven o'clock at night. When it was hung out by the door in the cage, which it frequently was, the Sparrows would often come round it, of which it seemed particularly fond; it learned their note, and would chirp and call them so exact, that any person who did not know to the contrary, would have supposed it to be the Sparrow chirping.

"The Redstart, in a wild state, chiefly visits gardens, lanes, or old buildings, and feeds on various kinds of insects, but seems to prefer the ants and their eggs. In spring, when it first arrives in this country, it mounts to the top of the loftiest trees, where it will sit and sing for hours, beginning in the morning by day-break. The earliest time of their arrival that I ever noticed, was the 25th of March; some years they come the beginning of April, and sometimes not till the middle of that month. It seems to be a very peevish and fretful bird, often shaking its tail, and repeating a quick shrill note, as if it was in fear; and one that I once reared from the nest, was often allowed to come out of its cage into the room. One day, when wanted to be got in, and not being willing to go, it was driven round the room a few times, which vexed it so much that it would take no food afterwards, though restored to its liberty; it stayed sulky for three days, and then died.

"I have now a beautiful male bird of this species, which I have possessed for six years; it always keeps itself in as good health, and in as fine a plumage, as if flying wild in the open air, continuing in song the greater part of the year. It is certainly the most sensible and cunning species of the tribe, and becomes very much attached to any person who notices it; mine flew out of its cage about two years since, and got away into the gardens, where it continued six or seven hours; it then returned to its cage, although it was a wild bird when first caught. In the year 1825, I saw a female of this species so late as the 21st of November, in Camera Square, Chelsea, flying about as lively as if it had been midsummer."

153. THE DUNNOCK, OR HEDGE-WARBLER.

Sylvia or Motacilla Modularis, LIN. *Fauvette d'hiver*, BUF. *Die Braunelle*, BECH.

Description.—This bird, which in its general bearing is very like the Wren, is five inches and a quarter in length, of which the tail measures two inches and a quarter. The beak is five lines long, very sharp and black, except in the inside, which is

rose-coloured, and the tip, which is white. The iris is purple; the feet ten lines high, and a yellowish flesh-colour. The head is small, and, as well as the neck, dark grey, spotted with dark brown; the back light rust-colour, spotted with blackish brown, like the back of the House Sparrow. The rump is pale grey; the cheeks, throat, and breast bluish grey; the belly and vent dingy white; the sides and shanks yellowish brown. The wings are dark brown, edged with rust-colour; and the feathers of the larger coverts are tipped with white. The tail is dark brown, bordered with a lighter shade of the same colour.

The female is more greyish blue on the breast, and more thickly spotted with brown on the head.

Habitat.—The Dunnock inhabits the whole of Europe, and frequents gardens, or more especially dense woods of coniferous or other trees. It is a bird of passage, though some individuals which have come from the extreme north occasionally winter with us, hopping about the hedges, and, like the Wren, flying near barns and stables. Those which have migrated return towards the end of March, and may be seen for some time about the hedges in the open country, before betaking themselves to the woods. It may either be allowed to range the aviary, perching at night on a pine branch, or in a corner separated from the room by a grating, or may be confined in a Nightingale's or Canary's cage.

Food.—The Dunnock feeds not only on all sorts of insects and worms, but also on various kinds of seeds, which is one reason why it is often able to survive the winter. In spring it looks for flies, larvae, caterpillars, and earth worms; in summer it lives principally on caterpillars; in autumn it feeds on grass, rape, and poppy seeds, as well as elderberries; and in winter, when there is no snow on the ground, it collects the seeds of different plants, and, when these fail, searches the holes and crannies of walls and trees for spiders, insects, or caterpillars.

In the aviary it will eat whatever comes to table—meat, vegetables, bread, and cake, as well as rape and poppy seed. It is also fond of the universal paste, which it will eat even immediately after it has been caught.

Breeding.—The nest of the Dunnock, which is built of clean lichen, sometimes interwoven with small roots of twigs, and lined with hair or fur, generally stands in a young fir tree, or thick bush, about two yards from the ground. The female

lays twice a year five or six greenish blue eggs ; and the young birds, which are soon able to leave the nest, are very unlike the parents. The corners of the beak and nostrils are rose-coloured ; the breast spotted with yellow and grey ; and the upper part of the body speckled with black and brown. They may be reared without difficulty on bread and poppy seed, soaked in milk. When tamed, both male and female use every effort to build a nest, and the females not only lay eggs without the male, but even pair with the Redbreast.

Diseases.—The very prevalent idea that wild birds suffer from no disease, is disproved by the case of the Dunnock, for both young and old birds are subject to the small-pox. On one occasion, when the disease was very general in my neighbourhood, a young Dunnock in my possession took it ; and though, by help of a copious supply of poppy seed and ants' eggs, it recovered, its tail fell off, and never grew again. Old birds are frequently shot, which have ulcerated or scabby legs and eyes—though, perhaps, only the result of chilblains. They are often diseased in the rooms of the linen-weavers who keep them ; their eyes swell, and the circle round them becomes bald ; then the beak grows scabby, and the disease at last spreads to the feet and the rest of the body. In spite of all this, they frequently live from eight to ten years in confinement.

Mode of Taking.—This bird may be caught without difficulty on its return from its migration in spring. Near some hedge, when it is observed, which from the scarcity of other birds at the time is not difficult, or when its call, *Issri!* is heard, let a spot be cleared of grass and moss, and set with limed twigs baited with meal or earth worms. If the bird be driven cautiously to this place, it rushes greedily to the bait. In autumn it may be caught in the area trap and in springes, and in winter in the Tit-trap. It is also frequently taken in the water-trap, to which it comes not only for the sake of bathing, but of the drowned insects and decayed roots which it finds there.

Attractive Qualities.—The Dunnock, though an agreeable addition to the aviary, on account of its liveliness, cheerful disposition, and pleasant song, has no pretensions to the name of the Tree Nightingale, by which it is sometimes called in Germany. Its song is simple, and resembles part of that of the

Wren or Skylark, consisting of the syllables *Tehudé, hudé, hudé*, frequently repeated, descending by a sixth every time, and gradually diminishing in power. The bird moves its tail and wings continually while singing, and sings throughout the year, except during the moulting season. If reared from the nest, it often learns to imitate the songs of other birds, and intermingle them with its own, though it is never able to repeat the Nightingale's song. Like the Crested Lark and the Wagtail, the Dunnock always sings during its quarrels and contentions with its fellow prisoners in the aviary.

ADDITIONAL.—The Hedge-Warbler, or Hedge-Accenter, Hedge-Chanter, Hedge-Sparrow, Hedge-Dunnock, and Shufflewings, are the various names by which this bird is known in different localities of Britain and Ireland, where it is so generally distributed, as to render any mention of particular counties unnecessary. It has been remarked, however, that although found in the western islands of Scotland, it has not been met with either in Orkney or Shetland. KNAPP's description of its habits are so fresh and original, that we are induced to quote them : “ The Hedge-Sparrow, or Shufflewings, is a prime favourite. Not influenced by season or caprice to desert us, it lives in our homesteads and our orchards through all the year, our most domestic bird. In the earliest spring it intimates to us, by a low and plaintive chirp, and that peculiar shake of the wings which in all times marks this bird, but then is particularly observable, the approach of the breeding season, for it appears always to live in pairs, feeding and moving in company with each other. It is nearly the first bird that forms a nest ; and this being placed in an almost leafless hedge, with little art displayed in the concealment, generally becomes the booty of every prying boy ; and the blue eggs of the Hedge-Sparrow are always found in such numbers on his string, that it is surprising how any of the race are remaining, especially when we consider the many casualties to which the old birds are obnoxious from their tameness, and the young that are hatched, from their situation. The plumage of this motacilla is remarkably sober and grave, and all its actions are quiet and conformable to its appearance. Its song is short, sweet, and gentle. Sometimes it is prolonged, but generally the bird perches on the summit of some bush, utters its brief modulation, and seeks retirement again. Its chief habitation is some hedge, in the rick-yard, some cottage-garden, or near society with man. Unobtrusive, it does not enter our dwellings like the Redbreast, but picks minute insects from the edges of drains and ditches, or morsels from the door of the poorest dwelling in the villages.

As an example of a household bird, none can be found with better pretensions to such a character than the Hedge-Sparrow." By some English authors this bird is called the Titling ; MUDIE describes it under that head, and says, " that its nest is one of those in which the female Cuckoo frequently deposits its eggs. Both birds," he says, speaking of this and the Titlark, " follow the Cuckoo, it may be sometimes from hostility, and sometimes in the character of foster-mothers ; at all events, they do it voluntarily, and often blithely. It is the small following the great, and the Cuckoo and the Titling, or better still for the double meaning of the first name, 'the *Gowk* and Titling,' of the Scotch, has become not an uncharacteristic, and in some instances, a very biting expression for the little of mankind danc-ing a senseless and thankless attendance on the great."

154. THE REDBREAST.

Sylvia or Motacilla Rubecula, LIN. *Rouge Gorge*, BUF. *Das Roth-kehlchen*, BECH.

Description.—This well-known bird is five inches and three quarters in length, of which the tail measures two inches and a quarter. The beak is five lines long, and brown, except at the root of the lower mandible and in the inside, where it is yellow. The iris, as well as the feet, which are eleven lines high, are blackish brown. The forehead, cheeks, and lower part of the body, as far as the belly, are dark orange ; the upper part of the body, and the wing coverts, are dingy olive green ; the rump, sides, and vent, of a lighter hue. The sides of the breast and neck are a beautiful pale grey ; the belly white ; the pen and tail feathers dark brown, edged with olive green ; and the first wing coverts are tipped with a triangular yellow spot.

In the female, which is somewhat smaller, the orange on the forehead is not so broad ; the colour of the breast is paler, and the feet are a yellowish brown. The yellow spots on the wing coverts are also generally wanting, though the very old females have sometimes small yellow stripes in their place. The males of one year old, which are caught in the spring, resemble the females very closely, in the absence, or very small size, of the yellow spots. The breast also is saffron yellow, but the shanks are always blackish brown.

There are also white and mottled varieties of this bird. If

the feathers of the wings and tail be pulled out several times, they will at last come white, which imparts a very engaging appearance to the little creature. These new feathers are, however, exceedingly weak and brittle.

*Habitat.**—At the period of migration, the Redbreast may be met with in great numbers in hedges and bushes, while in summer it retreats into the woods. It returns (*i. e.* to Germany) about the middle of March, and passes a fortnight or three weeks in the open country before betaking itself to the forests. In October it may again be observed among the hedges, though some remain till November, and others throughout the winter; but the latter annually pay for their dilatoriness with their lives, as the cold either kills them, or drives them to farm-yards or stables, where they are caught by men and cats. They also die if brought at once from the cold of the open air into a warm room; though when the change of temperature is effected gradually, they thrive as well as those caught in autumn or spring.

In cottages the Redbreast is often allowed to fly about the sitting or sleeping rooms, and is found to destroy flies, fleas, &c. A roost place should be made for them by fixing oak or beech branches to the wall, and in such a situation they will frequently live from eight to twelve years. Two birds, however, never agree together; if one be stronger than the other, the weaker is sure to be killed; and if of equal strength, they will divide the room between them, and each will furiously resent any attempt of the other to pass the appointed boundary. Those who are fond of the Redbreast's song, may keep it in a cage of any desired form.

Food.—In a wild state the Redbreast feeds on insects of various kinds, earth worms, and all sorts of berries. An earth or meal worm will soon induce it to eat the usual food of the aviary, though it thrives best on the Nightingale's food. It is also very fond of new cheese. It requires a daily supply of water, not only for drinking, but for bathing, in which it seems to delight, and often makes itself so wet, as to obliterate for the time every trace of colour from its plumage.

Breeding.—The Redbreast builds its nest, which is made of lichens loosely put together, and lined with grass stalks, hair,

The Redbreast remains in England throughout the winter.

and feathers, on the ground, among moss, stones, roots, or in deserted mole-hills, &c. The female lays twice a year, from four to seven yellowish white eggs, spotted and striped with orange, and having a ring of light brown at the thick end. The young birds are at first covered with yellow down, like chickens, and are afterwards grey, with a dingy yellow border on all the small feathers; though they do not acquire the red throat and breast till after the first moulting. They may be reared on bread soaked in milk, and if instructed by a Nightingale, will become excellent singers.

Diseases.—The Redbreast is subject to diarrhoea, for which a spider or two is the best cure. Ants' eggs and meal worms are an effectual remedy for decline; indigestion, arising from having eaten too many earth worms, often proves fatal; though it may be cured by administering meal worms and spiders.

Mode of Taking.—In spring the Redbreast may be taken by inserting stakes, to which limed twigs are attached, transversely, in the hedges, and driving the birds gently to them. The reason of this peculiar method is, that the Redbreast has a habit of perching on all projecting twigs at the bottom of a hedge, in order to examine the ground for earth worms. It may also be taken, like the Dunnock, on a place cleared of moss or grass, and set with limed twigs, baited with meal or earth worms; and in the Nightingale, Tit, or the water-trap. In autumn it easily falls into snares, baited with elderberries, though its feet are often injured by this plan, except great care be taken.

Attractive Qualities.—This bird is recommended to the amateur both by its tameness and the beauty of its plumage. It soon becomes so familiar, as to march upon the dining table and eat out of its master's dish, making, meanwhile, the most varied movements of its body, and repeating its call, *Sisri!* Its song, which, though loudest in spring, lasts throughout the year, has a solemn and melancholy effect. Those which are kept in cages sing with more ecstasy and energy than such as are allowed to fly about the aviary. In a country residence it is very easy to teach this bird to come and go at command, especially in the winter. M. GOEZE mentions one, which came back in the autumn of two successive years, having been turned out in the spring, and passed the winter in the warm room, where it was exceedingly tame and affectionate.

ADDITIONAL.—The following observations upon this well-known bird, are extracted from a beautiful work on the *Song Birds of Britain*, by JOHN COTTON, F.Z.S.*

“ The Redbreast, or Robin, as he is occasionally denominated, is familiar with us from childhood. Before we can read, we learn to repeat the fabled story of poor Cock-Robin’s death and burial. In all countries he is a favourite, and has what may be called a pet name. The inhabitants of Bornholm call him ‘Tommi Liden;’ the Norwegians, ‘Peter Bonsmed;’ the Germans, ‘Thomas Guidet;’ and in England he is called by the more familiar appellation of ‘Bob.’ ”

“ WORDSWORTH thus poetically addresses the Redbreast :—

‘ Art thou the bird whom man loves best,
The pious bird with the scarlet breast,
Our little English Robin ;
The bird that comes about our doors
When autumn winds are sobbing ?
Art thou the Peter of Norway boors ?
Their Thomas in Finland,
And Russia far inland ?
The bird who by some name or other
All men who know thee call thee brother,
The darling of children and men ?’

“ The melodious notes of this little favourite are well known. Its song is sweet and well supported, and is continued almost throughout the year. During spring the Redbreast haunts the wood, the grove, and the garden ; it generally retires to thick hedge rows or other secluded spots to breed in, and is then seldom heard till autumn ; when, on the retirement of our summer visitors, he again makes his appearance about our houses, and awakens our former attachment by pouring out his soft liquid carol, perched on some neighbouring shrub. It becomes the companion of the gardener, or faggot-maker in the woods, fluttering around and chirping its slender *Pip!* But when the cold grows more severe, and thick snow covers the ground, or frost hardens its surface, it approaches our houses, taps at the closed casement, casting sidelong glances in-doors, as envious of the warm abode. It is probably attracted to the habitations of man by the shelter that it there obtains from the rigour of the weather, and in search of the insects that are collected in great numbers by the same cause.”

On the subject of the extreme pugnacity of this bird, WOOD has the following remarks :—

“ My esteemed correspondent, MR. BLYTH, says he has seen two of these birds fight in his garden until one was killed ; and

though I have never known their battles come to that extremity, yet I have, on many occasions, observed them skirmishing with such relentless ferocity and unabated ardour, that had I not interposed, fatal consequences must inevitably have ensued to one party. On one occasion especially, I remember to have found two of these birds engaged in such glorious conflict, under a laurel bush, that neither of the combatants observed my approach ; or at all events, they heeded it not, and both of them fell into the hands of the 'prying naturalist.' On putting them into a cage, capacious enough to have held a dozen birds of a more peaceful nature, to my no small surprise, they renewed the combat as fiercely as ever. I now released one of my prisoners, and each of them instantly poured forth its song in defiance of the other, the one within the wires, the other at full liberty. The next day I set my other captive at liberty, and, on the evening of the same day, found the champions again at their post, fighting each other 'tooth and nail.' I now separated them for the third and last time. That is what one would call carrying the spirit of revenge rather too far. The organ of destructiveness must be very fully developed in this bird.

"I have often taken advantage of the extreme pugnacity of the Robin Redbreast, for the capturing others of its species. The method alluded to is as follows :—If you tie a Robin Redbreast by the leg, inside a small cage, and leave the door open, many minutes will not elapse before another of its kind, attracted by its fluttering, approaches the cage, hops round it two or three times, uttering its note of menace, and, lastly, boldly rushes into the cage, and enters into close combat with the unfortunate captive. How the battle might terminate if the birds were left to themselves, I know not, but suffice it to say, that the new comer may be captured, and, in his turn, be tied to the cage as a lure for its brethren. But it is unnecessary even to use a cage for this purpose. The birds may be tied, as soon as caught, to a stake, or anything that is at hand ; for the Robin Redbreast, when intent on destroying one of its fellow creatures, is little mindful of any danger that may threaten itself."

155. THE BLUEBREAST, OR BLUETHROATED WARBLER.

Sylvia or Motacilla Suecica, LIN. *Le Gorge Bleu*, BUF. *Das Blau Kehlchen*, BECH.

Description.—This handsome bird resembles, in many points, both the Redstart and the Wagtail, and may be considered as a link between the two. It is five inches and a half in length, of which the tail measures two inches and a quarter. The beak is sharp, blackish, but yellow at the corners; the iris

rown; the feet flesh-coloured; the claws blackish; the shanks fourteen lines high. The head, back, and wing-coverts, are greyish brown, mottled with a deeper shade of the same colour; a reddish white line passes over each eye; the cheeks are dark brown, spotted with rust colour, and bordered at the sides with dark grey. The throat, and half way down the breast, are dark azure blue, with a shining white spot, about the size of a pea, but which seems to increase or diminish when the bird is singing. Beneath the blue is a blackish stripe, which is again bounded by an orange streak. The belly is dingy white; the vent yellowish; the shanks and sides reddish grey. The pen feathers are dark brown, and the tail feathers rusty red near the root, and broadly tipped with black, while the two centre ones are entirely dark brown. Some males have in addition two, or occasionally even three, small pearly-white spots on the throat, while others have none. The latter seem to be very old birds, as I have remarked that in them the blue throat is of darker colour, and that the orange stripe is almost brownish red.

The difference in the plumage of the female is very noticeable. In young birds there is only a blue tinge at the sides of the throat, which afterwards changes to two long stripes of the same colour. The transverse orange stripe on the breast is also wanting; the throat is yellowish white, with a longitudinal black stripe on each side; and the feet are flesh-coloured.

Habitat.—The Bluebreast is a native of all parts of Europe. It is a bird of passage, leaving us for the more northern regions, where it breeds, at the beginning of April. About this time, especially in case of cold and snowy weather, it may be seen in considerable numbers on the banks of streams and canals, in the hedges of marshy meadows, or in farm-yards. Such as stop with us during the summer, pass that season in mountainous districts, which are well supplied with water; and in August the whole tribe returns, and may be seen in the cabbage gardens.

This bird may either be allowed the full range of the aviary, where it pleases by its engaging and rapid motions, as well as by its great tameness, or, for the sake of its song, may be kept in a cage. A Nightingale's cage is the fittest form, as in this, it is not so apt to dirty and destroy its beautiful plumage. In any case, it soon loses its tail feathers.

Food.—In a wild state the Bluebreast feeds on aquatic insects, worms of different species, the caterpillars of the cabbage moth, and, occasionally, on elderberries.

A fresh-caught bird, if designed to range the room, may be accustomed to the universal paste by mixing with it a few ants' eggs or meal and earth worms; nor will it continue in health unless the mixed diet be persevered in. When confined in a cage, it should be fed on Nightingale's food, on which it will live for six or eight years. It is very greedy, consuming every day its own weight of the paste, and voiding its excrement at every third or fourth step. It requires a daily supply of fresh water for drinking and bathing, in which it makes itself as wet as the Redbreast. I have noticed also that it invariably bathes in the afternoon.

Diseases.—Diarrhoea and decline are the diseases to which this bird is most subject. They may be cured by the treatment indicated in the Introduction.

Mode of Taking.—It is a generally received, but erroneous, opinion that the Bluebreast is a very rare bird, and is not to be seen in Germany more than once in five or ten years. I find this idea to be prevalent in Thuringia, although, since I called the attention of my friends to the time of the bird's migration, they are able to catch as many as they please. All that is necessary is to watch the banks of streams and canals, especially if near a wood, from the 1st to the 20th of April, when the snow is on the ground, and the weather is windy and inclement. If a spot be cleared from snow, and set with limed twigs, baited with meal or earth worms, the bird may be easily driven to it, and will take the bait greedily. It may also be taken in the Tit trap, or Nightingale's net, if set in a spot to which it is observed to resort. In autumn it can often be caught by setting limed twigs, baited with meal worms, among the cabbages. At the same season it is also occasionally taken in the water trap.

Attractive Qualities.—The tameness, cheerful disposition, beauty of plumage, and excellence of song, which recommend this bird to the amateur, have procured for it in Thuringia the name of the Italian or East Indian Nightingale. It runs with great rapidity, often elevates and spreads out its tail, shakes its wings continually, and calls *Feed, feed! Tack, tack!* It is to be regretted that it loses much of its beauty

after the first moulting; and especially that the blue of the breast becomes much paler, and at last changes into grey. It soon grows so tame as to eat from the hand, and even to come at a whistle. Its voice is beautiful, and almost gives the impression of two voices: the first a deep humming sound, like the vibration of a string; the second producing a succession of soft flute-like passages. If allowed to fly about the room, the Bluebreast always seeks a sunny place, and lays itself on its belly to bask in the sun, before singing. Its notes bear a strong resemblance to those of the Common Wagtail, though the latter wants the humming sound above described.

ADDITIONAL.—The Blue-throated Warbler, as it is frequently called, is with us an extremely rare bird. YARRELL mentions but two specimens, shot in this country, one near Newcastle, and the other in Dorsetshire: we have, however, heard of two other specimens, both taken by one individual, near the Reculvers, on the Kentish coast; they may, we believe, be now seen in the Margate museum, for which Mr. STEPHEN MUMMERY, who obtained them, has succeeded in securing many other rare specimens. Mr. J. D. HOY, a Suffolk naturalist, has furnished Mr. YARRELL with the following particulars relating to this species, as observed by him on the Continent:—“ This bird makes its appearance early in spring, preceding that of the Nightingale by ten or twelve days. I have always found this species in the breeding season in low swampy grounds, on the woody borders of boggy heaths, and on the banks of streams, running through wet springy meadows, where there is abundance of alder and willow underwood. The nest is placed on the ground among plants of the bog myrtle, on places overgrown with coarse grass, on the sides of sloping banks, in the bottom of stubs of scraggy brushwood, in wet situations. It is well concealed, and difficult to discover. I do not believe that they ever build in holes of trees. The nest is composed on the outside of dead grass and a little moss, and lined with finer grass. The eggs, from four to six in number, of a uniform greenish blue, eight lines long, and five lines and a half in breadth.

“ The notes of this bird have some resemblance to those of the Whinchat, but are more powerful. While singing, if undisturbed, it perches on the tops of the brushwood or low trees; but on the least alarm, it conceals itself among the low cover. It does not exhibit the quivering motion of the tail peculiar to the Redstarts, but very frequently jerks up the tail in the manner of the Nightingale and Robin, and while singing, often spreads it. It frequently rises on the wing a considerable height above the brushwood, singing, with the tail spread like a fan, and alights often at a

distance of fifty or sixty yards from the spot where it rose. On approaching the nest, when it contains their young, their notes of alarm, or anger, resemble those of the Nightingale's croak ; the wings are then lowered, the tail spread and jerked up. The Bluethroat commences his song with the first dawn of day, and it may be heard in the evening, when most of the feathered tribe are silent. These birds are caught in autumn by snares, baited with berries."

Wood calls this bird the Bluethroated Fantail, and expresses surprise that it has been placed by almost every writer in the same genus as the Redstart and the Redbreast, as it belongs most obviously to a different group, to the Wagtail sub-family (*Motacillinae*).

TAMEABLE ONLY WHEN YOUNG.

156. THE ARBOUR BIRD.

Sylvia or Motacilla Hippolais, LIN. *La Fauvette*, BUF. *Die Bastard Nachtigall*, BECH.

Description.—This admirable singing bird, which may be met with wherever there are trees and bushes, is five inches and a half in length, of which the tail measures two inches and a quarter. The beak is seven lines long, straight, blunt, on the upper side bluish grey, on the under reddish yellow ; yellow at the corners and in the inside. The iris is dark brown ; the feet lead colour, and ten lines in height. The head is narrow and pointed, and, as well as the beak, rump, and lesser wing-coverts, olive grey ; a light yellow stripe passes from the nostrils to the eyes ; and the whole of the under part of the body is the same colour. The tail and wings are dark brown ; the secondary pen feathers having so broad a border of white, as to form a white spot on the folded wings.

In the female the general colour of the plumage is paler, and the stripes over their eyes less distinct.

Habitat.—The Arbour Bird frequents gardens, groves, and thickets, and seems to prefer such woods as are partly composed of coniferous trees. It is a bird of passage, arriving at the end of April, and departing, before moulting, about the end of August.

In the aviary it must be kept in a Nightingale cage, and is very susceptible of any change of treatment. It is so delicate, as very rarely to become tame, if taken when old.

Food.—In a wild state this bird feeds on various insects, caterpillars, flies, spiders, beetles, &c., and, in case of necessity, will also eat berries.

In confinement it will rarely eat anything except the insects above mentioned. Much time and trouble are requisite to accustom it to the Nightingale's food.

Breeding.—The nest of the Arbour Bird is exceedingly elaborate. It is built upon a forked twig, generally about eight feet from the ground, and the exterior is composed of white birch bark, dried plants, cocoon silk, and wool, with a row of fine feathers round the upper margin. Inside is a lining of the thinnest grass stalks. The female lays five eggs, which are at first light red, but, when sat upon for a few days, become dark flesh-coloured, spotted with dark red. Each pair breeds but once a year; and if the nest be approached more than once, it is forsaken, whether the young ones are hatched or not.

The plan of taming this bird which is adopted in Hesse, is to rear it from the nest on ants' eggs and bullock's heart, chopped small. It should be kept in a warm place, and never taken out of its cage; as, if it perceives the slightest difference in the construction of its new habitation, it becomes melancholy, and soon dies. We may notice that the Arbour Bird does not moult till December or January, which seems to prove that it passes its winter in very southern latitudes.

Diseases.—The Arbour Bird is subject to the same diseases as the Nightingale.

Mode of Taking.—These are difficult birds to catch, and the only sure, though a cruel method, is to set limed twigs on the nest. They will, however, often forsake it, if they see any traces of its having been approached. They are rarely taken in the water-trap. In August, however, sponges, baited with currants, are often successful.

Attractive Qualities.—This is not only a handsome bird, but has a flute-like, varied, and melodious song. Some of its tones are long-drawn, and like those of the Nightingale; others are sharp and sonorous; and others, again, resemble the notes of the Chimney Swallow. While singing, its throat is very much dilated. Its call is *Dak, dak! Feed hoi! feed hoi!*

SWEET'S ACCOUNT.—“This interesting little species is generally the first of the warblers that visit us in spring, except *S. Cœnanthe*,

which occasionally precedes it. The earliest time of their arrival that ever I noticed, was the 12th of March ; some years they do not visit us till towards the end of that month. I have frequently known several days of hard frost after their arrival ; so that it is not a very tender bird. On their first coming to this country, they are mostly seen on the forwardest trees in orchards or copses, flying from branch to branch, and from tree to tree, singing their curious song of Chiff-chaff, chivvy-chavvy ; if the weather is fine and mild, they are continually in motion, flying after each other, and catching the gnats and small flies that happen to come in their way. This species, like the last, is very partial to the different sorts of aphis, which infest the trees and plants in summer. They are also fond of small caterpillars, flies, and moths ; on their first arrival, they feed chiefly on the larvæ of the different species of *Tortrix* that are rolled up in the unfolding buds of various trees. The birds of this genus render us much service in devouring those insects, that would otherwise destroy a great part of the fruit.

" The Lesser Pettichaps is readily taken in a trap, in the same manner as the last species, with which they are often in company in the summer. They soon get familiar in confinement ; when first caught, they should, if possible, be put with other birds ; and they will readily take to feed on bruised hemp seed and bread, and on bread and milk, which must, at first, be stuck full of small insects, or a quantity of aphides may be shook off a branch upon it ; when they have once tasted it, they will be very fond of it. One that I caught, took to eat it directly, and became so familiar, that in three or four days it would take a fly out of the hand ; it also learnt to drink milk out of a tea-spoon, of which it was so fond, that it would fly after it all round the room, and perch on the hand that held it, without showing the least symptoms of fear ; it would also fly up to the ceiling and bring down a fly in its mouth every time ; at last, it got so very tame, that it would sit on my knee by the fire and sleep ; and when the windows were open, it would never attempt, nor seemed to have the least inclination to fly out ; so that I at last ventured to entice it out in the garden, to see whether it would return. I with difficulty enticed it out at the door with a spoonful of milk—it returned twice to the room ; the third time it ventured into a little tree ; it then fled and perched on my hand, and drank milk out of the spoon ; from thence it flew to the ground on some damp chickweed, in which it washed itself, and got into a hollybush to dry ; after getting among the leaves, I could see no more of it, but heard it call several times. I suppose, after it got quite dry, that it left the country directly, as I could never see or hear it afterwards ; and it was then the end of November, when all the others had left for some time."

157. THE REED WREN.

Sylvia or Motacilla Arundinacea, LIN. *La Faurette des oiseaux*, BUF.
Der Feichsänger, BECH.

Description.—This bird is often confounded not only with others of a similar plumage, but is described in place of the Reed Thrush (*Turdus Arundinaceus*, LIN.), and from its habit of life imagined to be the same as the Reed Bunting (*Emberiza Schœnulus*, LIN.). It is five inches in length, of which the tail measures two inches. The beak is seven lines long, brown on the upper mandible, while the lower is a reddish flesh colour. The iris is chestnut brown; the feet eight lines in height, lead-coloured, and having a strong hinder claw. The upper part of the body is olive brown, darkest on the forehead and poll, and lightest on the rump; the cheeks are the same colour; and a yellowish white line passes over each eye. The knees are olive grey; the foremost pen feathers blackish, the hindmost dark brown, and all edged with olive brown. The coverts are like the back; the tail feathers like the pen feathers, but with a broader edge of olive brown; the tail very rounded, and almost wedge-shaped.

The female is hardly distinguishable from the male. The head is light brown, and a white stripe passes between the eyes; the upper part of the body is reddish grey; the throat white; the breast and belly whitish grey, tinged with yellow; the pen feathers of a darker brown than the tail feathers, and edged with olive grey.

Habitat.—The Reed Wren is found all over Europe, wherever there are reeds and rushes, up and down which it is constantly climbing. It is a bird of passage, departing at the beginning of September, and returning in the middle of April.

In confinement it is a very delicate bird, and must be kept in a Nightingale cage.

Food.—In a wild state the Reed Wren feeds on aquatic insects, and, in case of necessity, will also eat berries.

In the aviary it thrives best on Nightingale's food, mixed with insects.

Breeding.—The nest of the Reed Wren, which is long and ingeniously fastened to the reeds and bushes among which it is built, is composed of grass stalks woven together, and lined either with finer stalks or with hair and wool. The eggs, which are five or six in number, are greenish white, spotted

with olive green. The young birds may be reared on ants' eggs.

Mode of Taking.—The Reed Wren may often be caught by simply taking up a turf and setting on the spot limed twigs, baited with meal worms.

Attractive Qualities.—This bird has a pleasant song, something like that of the last-mentioned species, though not so full in tone. An agreeable peculiarity is, that it sings during the morning and evening twilight.

SWEET'S ACCOUNT.—“A pretty little lively species, generally frequenting the sides of rivers and ditches when in a wild state, where its warbling song may be heard amongst the reeds and sedges, or other thickets that are near the water; visiting us the beginning or middle of April, and leaving again in September. Towards autumn it sometimes leaves its usual haunts, and frequents the gardens for the sake of insects; it is particularly fond of the common house fly (*Musca domestica*), and I have frequently seen several of them in August and the beginning of September by the side of large dung-heaps, where those flies breed, and about that time are coming out from the pupa state in great quantities; they may then be readily taken in a trap baited with a small moth or green caterpillar; when first caught they should, if possible, be put in a cage with some other tame birds, or if one is placed in a cage by itself, it should be set near a cage with some other bird in it, which reconciles it to confinement, being so very wild and restless when first caught, that if there is not another bird with, or near it, there will be but little chance of its living; but it soon becomes very tame and familiar in confinement, and in a very short time will be sociable enough to take a fly, or other small insect, from the hand of the person who attends to it.

“In confinement the birds of this species will readily take to feed on the bruised hemp seed and bread, and some raw lean meat mixed with it; to make them take to it immediately, a little should be placed in a small pan or dish, mixed up with a quantity of flies or other small insects, and others stuck on the surface of it; some yolk of a boiled egg should also be done up in the same manner; when once they taste this, they are particularly fond of it; the egg should not be mixed with the bread and hemp seed, but be given by itself as a change of food; any small insects, such as the smooth caterpillars, moths, butterflies, spiders, grasshoppers, crickets, ants, and various other insects, they are very partial to, and the more is given them, the better will be their health and spirits. Like the Sedge Warbler, the present species

is very fond of washing often in a pan of water, which is beneficial to their health in summer, but is very hurtful in winter ; at that time they should be only allowed sufficient to drink, or only be let wash about once a week. They are very restless when the time arrives for them to be on their passage, which lasts a considerable time.

" I once found a nest of these birds, with five young ones ; it was fastened up to the side branches of a poplar tree, that grew at a little distance from the river, in Broomhouse Lane, Fulham."

158. THE HAYBIRD, OR WILLOW WREN.

Motacilla Accredula, Lin. Der Fitis Sanger, Bech.

Description.—This bird, which must not be confounded either with the Arbour Bird or the Rufous Warbler, is four inches two lines in length, of which the tail measures nearly two inches. The beak is very pointed ; the upper mandible brown ; the lower mandible and the inside yellow ; the shanks are eight lines high, and a yellowish flesh colour. The upper part of the body is a dark olive. A yellowish white stripe passes over the eyes ; and an indistinct dark brown streak between them. The cheeks are yellowish, and there is a reddish grey spot near the ear. The throat and breast are whitish yellow, spotted with darker yellow ; the under wing coverts yellow ; the pen and tail feathers dark brown.

Observations.—This species, which frequents gardens and groves, may be met with in the wooded districts. It is a bird of passage, arriving in the middle of April, and departing at the beginning of October. In August, at which time the young birds are of a pale sulphur colour on the lower part of the body, they may be noticed in great numbers on the willow trees. In a wild state it feeds on small insects and their eggs, and also eats red and black elderberries. If taken when there are flies, even an old bird may be accustomed to the food of the aviary, by mixing a few with it. In general the Haybird will eat both fresh and dry ants' eggs, and soon becomes used either to crushed hemp seed, or the universal paste. It seems to be a less delicate bird than the Fauvette. In the aviary it generally chooses a perch for itself, to which it always returns, after having made the circuit of the room. If it catches any flies, it goes back to its perch to eat them. It is a clean and lively bird : and its song, *Deedee, deyheu, dahee, tzea, tzea!* as well as its call, *Hoid, hoid!* are continually heard. Its nest,

which is oval, and composed of moss and leaves, lined with feathers, is usually placed under a bush. The female lays six or seven white eggs, spotted with violet; and the young birds, of which those which have the yellowish plumage should be chosen, may be reared on ants' eggs and bread and milk.

In autumn these birds may be taken in nooses, baited with elderberries. In spring it is a good plan to set limed twigs, baited with meal worms, in the hedges; and in summer it is very frequently caught in the water trap.

SWEET'S ACCOUNT.—“An elegant little species, which visits us about the middle of April, and leaves us again the latter end of September, or beginning of October. In its wild state, it feeds entirely on small insects, and chiefly on the different species of *aphis*, but it will not refuse small flies or caterpillars; it is easily taken in a trap baited with small caterpillars, or a rose branch covered with aphides; and it will soon become very tame in confinement. One that I caught in September, was, in three days afterwards, let out of its aviary into the room to catch the flies, which were numerous at that season; after amusing itself for some time in catching flies, it began singing; it did the same several other times when it was let out, and in a few days, it began to sing in its aviary. It soon became so familiar, that it would take flies out of the hand, and when it was out in the room, if a fly was held toward it, it would fly up and take it out of the hand. It was also taught to drink milk out of a tea-spoon, by putting some flies in it; as soon as it had tasted the milk, it was very fond of it, as most of the birds of this genus are; if the spoon was held towards it, and it was called *Sylvia*, it would fly up and perch on the finger, or on the handle of the spoon, and drink the milk, but it never got so tame as the next species, neither was it so expert in catching flies; perhaps, the reason was, it became so very fat in eating so much bruised hemp seed and bread, and milk and bread, that it cared but little for any other food.

“These birds are very plentiful some seasons, flying about from tree to tree, and singing their pretty soft note, which is not unlike the song of the Redbreast, but not so loud. Wherever any plants are infested with any kind of *aphis*, there the Willow Wrens are almost certain to be, often quarrelling, and flying after one another; and they will even attack other birds that are much larger than themselves.

“The Willow Wren seems to be more tender than the *Sylvia Hippolais*, to which it is nearly related. When in confinement, it is fond of creeping up to the other birds for the sake of their

warmth, particularly at night ; and it will not rest till it is very near to one, against which it squeezes itself as close as possible, this is also the case with *S. Hortensis*.

" It is also a very desirable bird, as it continues in song the greater part of the year, and its song is so loud and shrill, that it may be heard above that of any other. I possess a female of this species that sings frequently, but her note is very different from that of the male. The Honourable and Reverend WILLIAM HERBERT observes, 'that it ought to be mentioned, that gardeners are in the habit of cruelly destroying the nest of this bird, confounding it with the Greater Pettichap, and imagining that it attacks the cherries ; whereas it never touches fruit, but is the gardener's friend, picking the aphides from the trees with great industry.' This is the case with several other species, the gardeners confounding them altogether under the common appellation of Whitethroats, and destroying them indiscriminately, whereas it is only the Greater Pettichaps and the Blackcap that materially injure the fruit ; but as the Blackcap has not a black head the first season, it is not in general distinguished from the Whitethroat."

159. THE RUFOUS WARBLER.

Motacilla Rufa, LIN. *Fauvette Rousse*, BUR. *Der Weiden Zeisig*, BECH.

Description.—Except the Golden-crested Wren, this is the smallest of European birds. It is only four inches long, of which the tail measures one inch and three-quarters, and the beak four lines. The feet are blackish brown, and eight lines high ; the beak very sharp, externally blackish brown, and yellow inside ; the eyes dark brown.

In colour it bears a close resemblance to the Willow Wren. The upper part of the body is reddish grey, somewhat tinged with olive green. A dusky straw-colour stripe passes over the eyes ; the cheeks are brownish. The under part of the body as far as the breast is reddish grey ; the belly dirty white, and, as well as the part beneath the wings, covered with small rust-coloured spots. The pen and tail feathers are blackish grey.

The female is somewhat smaller, and less spotted with yellow on the under side of the body.

Observations.—Although this bird can bear cold better than the other species of the Warblers, and may hence be seen as early as March, on the hedges and willow trees, it cannot be

kept in confinement except reared from the nest. In April it frequents the woods and thickets, when its song, *tzip, tzap!* may frequently be heard. In October, it collects in flocks in the gardens, and on the willow trees; and in November, migrates to a warmer climate. It is at home all over Europe. It feeds on small insects and their eggs, and in autumn, on elderberries. An old bird will live in confinement only so long as it is supplied with flies, and very rarely becomes accustomed to the Nightingale paste.

The nest is built upon the ground, and consists of a round mass of roots, grass, wool, and feathers. It contains five or six white eggs, spotted with red. The young may be reared on ants' eggs.

These birds may be caught in the same manner as the Willow Wren. They may be allowed to fly about the room, or confined in a small cage with perches.

160. THE SEDGE WARBLER.

Silvia Salicaria, LATHAM. *Sylvia Phragmites*, TEMMINCK. *Calamoherpe Phragmites*, MACGILLIVRAY. Sedge Reedling, Sedge Bird, Sedge Wren.

This little bird, which is included by MR. SWEET in his account of *British Warblers*, and which, therefore, we have thought it well to admit here, is described by MACGILLIVRAY as rather common in many of the marshy parts of England, but rare in Scotland: it arrives in April, and departs in October; its favourite resorts are places overgrown with reeds and other tall aquatic plants, among which it searches for its insect food, and places its nest, which is bulky, loosely constructed of grasses, and lined with finer materials of the same nature, with some hair. The eggs, generally five, are eight-twelfths of an inch long, six-twelfths in breadth, of a greenish white colour, dotted and freckled with light brown and greenish grey. This bird has a lively, modulated, and mellow song, which is often heard late at night. It is very active, but, from its mode of life, is seldom seen.

The tail of the bird is rather long, slightly rounded; the upper part of the head brownish black, the feathers edged with light brown; the back and wing coverts light olive brown, tinged with yellow, the central parts of each feather dark brown; rump light reddish brown; a yellowish white

streak over the eye; the lower parts brownish white; the lower tail coverts unspotted; the female similar, but with the upper part of the head more tinged with brown; the back of a lighter tint, the rump less bright. The young resemble the adults, but are more tinged with red.

SWEET'S ACCOUNT.—“This pretty little species is very plentiful in the neighbourhood of London, which it visits the beginning of April, and leaves again in September, frequenting the sides of rivers, or any ditches, where there is a thicket of reeds or sedge, in which it builds its nest, and is almost continually in song, both by day and night; its song consists of a variety of notes, some of which are very loud, and may be heard at a considerable distance, generally beginning with *chit, chit, chiddy, chiddy, chiddy, chit, chit, chit*. It is readily caught in a Nightingale trap, baited with a living green caterpillar, or a butterfly, as in a wild state it feeds entirely on living insects, almost all sorts of flies, small moths, and butterflies, besides various sorts of caterpillars, and other small insects. It is a very lively bird, and shows scarcely any symptoms of fear, approaching very near to any person who does not drive or frighten it, and it soon becomes very tame and familiar in confinement, where, if well managed, it will sing the greater part of the year.

“The present species, when first caught, should, if possible, be placed in a large cage or aviary, with some other small birds, and must at first be supplied with some sort of insects; flies, caterpillars, or maggots, should be put in a little pan, and when the bird has found them out, and begins to feed on them, some of the bruised hemp-seed and bread, with some bits of raw lean meat mixed up with it, should be placed in the same pan, with some insects stuck in it, that in picking up the insects it might taste the other food, and it will soon take to feed on it freely; some of the yolk of an egg boiled hard, should also be bruised up, and moistened with water, that it might stick to the insects, which are also to be stuck in it; when the bird has tasted this, it will eat it readily, as it is particularly partial to egg after once tasting it; and it does for a change in the winter, instead of insects, when very few of them are to be procured.

“These birds are particularly partial to washing themselves in water, if it be placed in a pan in their cage or aviary; at some seasons they will wash three or four times in a day; this will not hurt them in summer, when the weather is warm, but it weakens them very much if they are allowed to wash in the winter; once a week is often enough at that season, and then the water should be put in the cage in the morning, and after they have washed, it

should be again removed, they will then have time to dry themselves properly before the evening.

"I have no doubt but the present species, with *S. Arundinacea*, and *S. Locustella*, and some other exotic species, will be hereafter divided from this genus, and also from the other Warblers, and will form a distinct one of themselves."

161. THE GRASSHOPPER WARBLER.

Sylvia Locustella, LATHAM and TEMMINCK. *Sibillatrix Locustella*, MACGILLIVRAY. Grasshopper Chirper, Cricket Bird, Brakehopper.

This is another of the British Warblers described by SWEET, and not mentioned by the German Naturalist. According to MACGILLIVRAY, it is a slenderly and elegantly formed, but plainly coloured little bird, remarkable for its hideling habits, and its peculiar ery, which greatly resembles that of the mole-cricket. It arrives from the middle to the end of April, and is generally dispersed in England. It has also been found in a few instances in the south of Scotland. The nest is composed of dry grass, lined with similar but finer materials; the eggs found in one by MR. WEIR, of Linlithgowshire, were white, closely freckled with carmine dots.

The tail of the bird is long, much graduated, and rounded; plumage of the upper parts dull olive brown, with oblong dusky spots; of the lower parts pale yellowish brown; the fore part of the neck with a few dusky lines; the tail coverts with a central brown mark. Female similar, but without the dusky lines on the fore part of the neck. Young, yellowish brown, spotted with dusky above, brownish yellow beneath.

NEVILLE WOOD calls this bird the Sibilous Bushhopper, and says that its proper situation in the system appears to be in the sub-family *Philomelina*, immediately after the genus *Salicaria*, to which it has a direct affinity. WHITE makes some interesting remarks on its curious note, as does also BLYTH, in the *Magazine of Natural History*, vol. vii. p. 366.

SWEET'S ACCOUNT.—"The present species is very rare in the neighbourhood of London, and I have never seen more than a single living one myself, anywhere in the vicinity; that one I caught in a Nightingale trap, about the middle of August, 1823, in Mr. Colvill's Grosvenor Nursery, in the Five-Fields, near Grosvenor Place, which is now partly covered with houses; I kept it till the February following, and it would have succeeded well, had I not allowed it to wash so much, not thinking at the time that the washing

would hurt it; so that it frequently washed itself three or four times a day, which at last weakened it so much, that on a cold day it caused its death. It never attempted to sing while I had it in confinement, which was probably from its being an old bird; and I have not been able to procure another since. It thrived remarkably well on the same sort of food as the other birds of this tribe, but was particularly fond of the yolk of an egg boiled hard, also of the raw lean meat that was cut up small, and mixed in the bread and bruised hemp seed; it would also occasionally feed on the bread and milk, but it was not so fond of that as some of the other birds. Insects of various sorts it was very partial to, particularly small caterpillars, ants' eggs, spiders, moths, and butterflies, and flies of various sorts; the latter it was very dexterous in catching when they came near its cage.

"These birds are not uncommon in several parts of England; they are said to be plentiful on Malmesbury Common, Wiltshire, in summer, where they breed; they are also frequently seen in Norfolk and Suffolk, and in various other parts, where they build their nest among some high grass or sedge, in which it is so concealed, that it is with difficulty found, except by watching the old birds carrying food to their young; or when they are building, they may be seen carrying materials to construct their nest. The young ones may be easily reared by placing their nest in a little covered basket, nearly filled with dry moss or soft hay, and to be fed, whenever they require it, with the same sort of food as recommended for the old ones; being careful to keep them clean, and a few very small gravel stones should be mixed with their food occasionally, that their bones may become strong and firm, so that they may not be cramped."

162. THE WOOD WREN.

Sylvia Sylvicola, LATHAM and MONTAGUE. *Sylvia Sibilatrix*, TEMMINCK.
Phyllopleuste Sylvicola, MACGILLIVRAY. Wood Warbler, Wood Wren,
Yellow Wren, Yellow Wood Wren.

This is another of the Warbler genus of birds which is not described by BECHSTEIN. YARRELL observes, that though called *Motacilla Trochilus* by GILBERT WHITE, it was clearly distinguished by him from the two most nearly allied species, (the Willow-Warbler and the Chiff-chaff, which with this bird form MACGILLIVRAY's genus *Phyllopleuste*) as early as 1762. In 1796, COL. MONTAGUE, having seen and heard this species in various localities in several western counties, and having obtained also some specimens, nests, and eggs, furnished particulars of it to the LINNÆAN SOCIETY, which were published in

the fourth volume of their *Transactions*. In this country the bird is pretty well known, being generally distributed through the wooded districts during the season of its sojourn. It may be at once distinguished from the true *Trochilus*, the Willow Warbler, which it most nearly resembles, by the broad streak near the eye, and ear coverts, of a bright sulphur yellow; by the pure green colour of the upper parts of the body, and by the delicate and unsullied white of the belly and tail coverts. The following is

SWEET'S ACCOUNT.—“*S. Sylvicola*. Length five inches and a half; bill horn colour; upper mandible bent at the top, and rather longer than the under; irides hazel; nostrils beset with bristles; top of the head, neck, back, and tail coverts, olive green; throat and cheeks yellow, paler on the breast; belly and vent of the most beautiful silvery white; through the eye passes a yellow line; wings and coverts brown, edged with green; tail consisting of twelve feathers, rather forked, and of a brown colour, edged with green on the exterior webs, and with white on the interior, the first feather wanting the green edge; under part of the shoulder bright yellow; legs rather more than an inch long, of a horn colour; claws paler. T. LAMB, in *Linnæan Transactions*, v. ii. p. 245.

“An elegant and interesting little bird, which arrives in this country the beginning of April, and leaves it in August, or the beginning of September. I have never observed it in any other situation than amongst tall trees, in woods or plantations, where it is readily detected on its arrival, by its shrill shaking sort of note, which may be heard at a great distance, and cannot be confounded with the song of any other bird; when it first arrives, it continues to sing nearly all day long, and its song is continued more or less through most part of the summer, except the time that it is engaged in feeding its young; it is then discovered by a dull mournful sort of call, quite different from that of any other bird; it may be easily watched to its nest, which is built on the ground in a thicket of small bushes, and consists of moss and dry leaves, with a covering at the top of the same materials, so that it is scarcely possible to discover it, without watching the old birds to it, either when they are building, or carrying food to their young. I believe they are to be found in most woods and large plantations in summer. I have frequently heard them in Kensington Gardens, amongst the tall trees; and they are not uncommon in Coombewood, in Surrey, where I procured a nest with young ones, last summer; and I find they may be reared by hand from the nest quite readily, when they will be very tame

and familiar, and any birds of this tribe may be reared from the nest in this manner.

"The method that I practise in bringing them up is, to let the young birds be nearly fledged; I then place the nest in a little basket with covers, nearly filled with moss, which keeps them warm, and I feed them with moist bread and bruised hemp seed mixed together, and small bits of raw meat mixed with it; I also give them a little bread and milk, and the yolk of an egg boiled hard, not forgetting to let a drop or two of water fall into their mouths occasionally; they require to be fed several times a day, giving them as much as they will take at each time; they must also be kept clean, for if allowed to get dirty, they will not succeed; as soon as they are fed, the covers of the basket must be shut down, and they will in a few days learn to peck, and feed themselves; but they will peck at living insects before they will learn to eat the other sorts of food; when they are properly fledged, a little fine gravel should be mixed with their food, as this turns to lime, and hardens their bones, and keeps them from being cramped.

"The first notice we have of this bird as a native of England, is by Mr. T. LAMB, in the second volume of the *Linnæan Transactions* above quoted, and I have known it as long as I have known anything about birds; it being plentiful in the woods of R. Bright, Esq., of Hamgreen, near Bristol, where it was known, when I was a boy, by the name of the *shaking bird of the wood*, from its singular note, which sounds as if it was shaking as it utters it, and which it really is, as may be readily seen by any person who may take the trouble to notice it. I have adopted MONTAGUE's name for this species, as I believe it has the right of priority.

"In my opinion, the present species is as well worth keeping in a cage or aviary as any one of the genus, as it is an elegant bird, and has a pleasant and singular song; it feeds readily on bruised hemp seed and bread, and a little raw lean meat mixed with it, also bread and milk; but it is most partial to the yolk of an egg boiled hard and crumbled; it is also very fond of flies, small moths, caterpillars, the different sorts of aphis, and many other insects."

163. THE DARTFORD WARBLER.

Sylvia Dartfordiensis, PENNANT. *Motacilla Provincialis*, MONTAGUE and BEWICK. *Sylvia Provincialis*, TEMMINCK. *Melizophilus Provincialis*, MACGILLIVRAY.

By the last-named author this bird is also called the Province Furzeling and the Furze Wren. It is described by him as having the upper parts of the body blackish grey; fore part

of neck and sides reddish brown; abdomen white; tail long and graduated; bill brownish black, with the base of the lower mandible orange; tarsi and toes light reddish brown; claws dark. Female similar, but with the tints lighter, and the throat streaked with white.

This bird is a permanent resident with us, although very locally distributed. Dr. LATHAM first described it as a British species, from specimens obtained at Bexley Heath, near Dartford, in 1773. The generic name, *Melizophilus*, was applied to it by Dr. LEACH, in his *Systematic Catalogue of the Specimens of the Indigenous Mammalia and Birds preserved in the British Museum*, date 1816. Other naturalists have to a considerable extent admitted this generic distinction, as a reference to SELBY, JENYNS, &c., will show.

GOULD mentions having obtained specimens of this bird at all seasons of the year, and RENNIE has observed it suspended over a furze, and singing as early as the end of February.

SWEET'S ACCOUNT.—“One of the rarest of the British species of this tribe, but mentioned by MONTAGUE as not uncommon about Kingsbridge, Devon, and in the neighbourhood of Truro, Cornwall; it is also occasionally met with on Bexley Heath, near Dartford, Kent; also on Blackheath, and on Wandsworth and Wimbledon Commons, where it is said to build in the furze bushes, and feed on grasshoppers, moths, butterflies, caterpillars, ants, and various other insects. I have never been able to procure a living bird of this species, although there is no doubt but it might be readily caught in a Nightingale-trap, baited with a caterpillar, or some other living insect; or young ones might be easily bred up from the nest, in the same manner as mentioned under the other species. Should any of my subscribers be able to procure me one of them, or a nest with young ones, I should feel much obliged, and would be willing to purchase it, or exchange any other sort that I have to spare in return.

“In confinement these birds should be managed exactly the same as the other species, and will, without doubt, take to feed readily on the bruised hemp seed and bread, with some bits of raw meat cut small, and mixed with it; to bring them to eat it immediately when first caught, it will be requisite to stick it full of flies or caterpillars, or other small insects; some of the yolk of an egg boiled hard, should also be given them occasionally, for a change, and as many insects as can be procured, which will be the means of keeping them, and all the birds of this tribe, in

excellent health, and will make them sing more, and louder than they would otherwise do."

ADDITIONAL.—We are tempted to add to the above a lively description of the bird given by RUSTICUS, in his *Letters from Godalming*, where he says, "We have a bird common here, which I fancy is almost unknown in other districts, for I have scarcely ever seen it in collections; and from the few remarks about it, and sketches of it in natural histories, no correct idea can be found. I mean the FURZE WREN, or, as authors are pleased to call it, the Dartford Warbler. We learn that the epithet Dartford, is derived from the little Kentish town of that name; and that it was given to the Furze Wren, because he was first noticed in that neighbourhood. The term 'Warbler' is inappropriate, as the Furze Wren is a poor Warbler. If you have ever watched a Common Wren (a Kitty Wren we call her), you must have observed that she cocked her tail bolt upright, strained her little beak at right angles, and her throat in the same fashion, to make the most of her fizgig of a song, and kept on jumping, and jerking, and frisking about, for all the world as though she was worked by steam; well, that's more the character of the Dartford Warbler, or, as we call it, the Furze Wren. When the leaves are off the trees, and the chill winter winds have driven the summer birds to the olive gardens of Spain, or across the Straits, the Furze Wren is in the height of his enjoyment. I have seen them by dozens skipping about the furze, lighting for a moment upon the very point of the sprigs, and instantly diving out of sight again, singing out their angry impatient ditty, for ever the same. Perched on the back of a good tall nag, and riding quietly along the outside, while the fox-hounds have been drawing the furze-fields, I have often seen these birds come to the tops of the furze. They are, however, very hard to shoot, darting down directly they see the flash, or hear the cap crack, I don't know which. I have seen excellent shots miss them, while rabbit-shooting with beagles. They prefer those places where the furze is very thick, high, and difficult to get in. This bird breeds every year in the furze bushes in Munsted, Hightown, Headley, Elstead, and many other heaths in our neighbourhood. And although it is so common in the winter, and so active and noisy when disturbed by dogs and guns, still, in the breeding season, it is a shy, skulking bird, hiding itself in thick places, much in the manner of the Grasshopper Lark, and seldom allowing them to hear the sound of its voice."



WREN.

Stewart delt.

Lizars sc.

164. THE WREN.

Sylvia or Motacilla Troglodytes, LIN. *Roitelet, Buf. Der Zaunkönig,*
BECH.

Description.—This bird, almost the smallest of those described in the present work, is only three inches and a half in length, of which the tail measures one inch and a quarter. The beak is five lines long, somewhat curved downwards at the point. The upper mandible is blackish brown; the lower yellowish white; and the inside yellow. The iris is nut-brown; the feet greyish brown, and seven lines in height. The upper part of the body is a dingy rusty brown, crossed by indistinct dark brown stripes. A reddish white stripe passes over the eyes. The wings are dark brown, and the tail rust colour; both, however, striped with black. The under part of the body is generally reddish grey; but the belly is white, the sides and vent tinged with rust colour, and all covered with transverse black stripes.

The female is still smaller. The general colour of the plumage is a reddish brown, covered with indistinct transverse stripes. The feet are yellow.

Habitat.—The Wren may be met with in all the woody and mountainous districts of Europe. It is not a bird of passage; and is often seen, especially in winter, near human habitations.

The Wren may be kept to most advantage in a large cage of osiers or wire. If allowed to range the room, its minute size gives it many opportunities of escape.

Food.—It feeds throughout the year on small insects, for which in winter it searches in barns, stables, crevices of walls, and piles of wood. In autumn it eats red and black elderberries.

As soon as caught, the Wren should be fed on meal worms, flies, and elderberries, by the use of which it may after a while be brought to eat the Nightingale's paste. In this way even old birds may be preserved in health for a considerable time.

Breeding.—The Wren builds its nest in any quiet corner: it has been found in holes in the ground, hollow trees, among roots, under roofs, and in many other similar places. It is oval in shape, built of moss, lined with hair and feathers, and has at the side a little opening for the bird's entrance and exit. The female lays seven or eight small whitish eggs, sparingly spotted with white. The young birds are rust coloured, with

black and white spots, and may be reared on ants' eggs, with which the common universal paste may be mixed by degrees. I know an instance in which a Wren actually built a nest and laid eggs in the sleeve of an old coat.

Mode of Taking.—During the winter the Wren may be taken in a Tit trap, baited with meal worms. In autumn they are often caught in sringes, set with elderberries, though this mode frequently injures their feet.

Attractive Qualities.—The Wren is an exceedingly lively bird, particularly active and engaging in its movements. For so small a bird, its song is loud, and lasts throughout the year. It is not unpleasant, and in some of its tones resembles that of the Canary. Its call is *Terr, Tzerzererrrr!* I have not myself been able to preserve it for more than a year, though I am assured by other amateurs that it may be kept for two or three.

ADDITIONAL.—With a few exceptions, embracing the Kinglets, the Creeper, the Chiff-Chaff, and the smaller Tits, the Kitty, or Jenny Wren, as it is familiarly and affectionately called, is the smallest of our native birds, as well as the best known, if we except the Robin-Redbreast, with which in popular regard it is generally associated. MUDIE and MACGILLIVRAY both give a good account of this lively little songster; the latter says, that "its flight is effected by a rapid and continuous motion of the wings, and therefore is not undulated, but direct; nor is it sustained, for the bird merely flits from one bush to another, or from stone to stone. It is most frequently met with along stone walls, among fragments of rocks, in thickets of whins, and by hedges, where it attracts notice by the liveliness of its motions, and frequently by its loud chirring noise. When standing, it keeps its tail nearly erect, jerks its whole body smartly; then hops about with great alacrity, using its wings at the same time, and continually enunciating its rapid *chit*. Although it seldom ascends a tree directly, like the Creeper, it may often be seen climbing sidewise to some height, and on fences or bushes it usually makes its way to the top by hopping from one spot to another. If usually pleased with a low station, it yet sometimes ascends even to the higher branches of very tall trees, and may occasionally be seen there in company with Kinglets and Tits. In spring and summer, the male has a very pleasing, full, rich, and mellow song, which it repeats at intervals; and even in autumn, and on fine days in winter, it may occasionally be heard hurrying over its ditty, the loudness and clearness of which, as proceeding from

so diminutive a creature, is apt to strike one with surprise, even after it has long been familiar to him.

"During the breeding season, Wrens keep in pairs, often in unfrequented parts, such as bushy dells, mossy woods, the banks of streams, and stony places overgrown with brambles, sloes, and other shrubs; but toward the end of autumn they approach the habitations of man, and although never decidedly gregarious, sometimes appear in small straggling parties. They are not, properly speaking, shy, as they seem to conceive themselves secure at the distance of twenty or thirty yards, but, on the approach of a person, conceal themselves in holes between stones, or among the roots or bushes. In liveliness and activity, the Wren rivals the Kinglets, Tits, and Creepers, as, indeed, might be expected, from its diminutive size, birds as well as quadrupeds being generally more slow in their motions the larger the bulk."

From among many other anecdotes illustrative of the sagacity, if we may so call it, of this bird, we meet with the following by KNAPP, whose concluding remarks are worthy of serious thought and attention.

"June 14.—I was much pleased this day by detecting the stratagems of a Common Wren to conceal its nest from observation. It had formed a hollow space in the thatch, on the inside of my cow-shed, in which it had placed its nest by the side of a rafter, and finished it with its usual neatness; but lest the orifice of its cell should engage attention, it had negligently hung a ragged piece of moss on the straw-work, concealing the entrance, and apparently proceeding from the rafter; and so perfect was the deception, that I should not have noticed it, though tolerably observant of such things, had not the bird betrayed her secret, and darted out. Now from what operative cause did this stratagem proceed? Habit it was not; it seemed like an after-thought; danger was perceived, and the contrivance which a contemplative being would have provided was resorted to. The limits of instinct we cannot define: it appeared the reflection of reason. This procedure may be judged, perhaps, a trifling event to notice; but the ways and motives of creatures are so little understood, that any evidence which may assist our research should not be rejected. Call their actions as we may, they have the effect of reason; and loving all the manners and operations of these directed beings, I have noted this, simple as it may be."

MACGILLIVRAY also describes the nest as enormously large, roundish, or oblong, composed chiefly of moss, and lined with feathers. RENNIE observes, that the Wren does not begin at the bottom of its nest first, as is usual with most birds; but if against a tree, first traces the outline of the nest, which is of an oval

shape, and by that means fastens it equally strong to all parts; and afterwards encloses the sides and top, near which it leaves a small hole for an entrance: if the nest is placed under a bank, the top is first begun, and well secured in some cavity, by which the fabric is suspended.

It was remarked by WILLOUGHBY, that "it is strange to admiration, that so small a bodied bird should feed such a company of young, and not miss one bird, and that in the dark also." RAY ranks this circumstance among "those daily miracles of which we take no notice." These observations are censured by MR. BOLTON, who says that "any one who thinks about it, and compares the dimensions of the window with those of the house within, will instantly perceive that a Wren's nest is more strongly lighted than any palace in the kingdom." But this naturalist, in his haste to find fault with others, has quite overlooked the circumstance, that the parent bird, while feeding her numerous family, stands in the entrance of her dwelling, and must therefore in a great measure exclude the light. All this, however, is mere quibbling, from which we gladly turn to quote MANT, who in his description of the month of November, speaks of

"The quick note of the russet Wren,
Familiar to the haunts of men.
He quits in hollow'd wall his bow'r,
And thro' the winter's gloomy hour
Sings cheerily: nor yet hath lost
His blitheness, chill'd by pinching frost;
Nor yet is forc'd for warmth to cleave
To cavern'd nook, or strawbuilt eave.
Sing, little bird! Sing on, design'd
A lesson for our anxious kind;
That we, like thee, with heart's content
Enjoy the blessings God hath sent;
His bounty trust, perform his will,
Nor antedate uncertain ill!"

165. THE GOLD-CRESTED WREN.

Sylvia or Motacilia Regulus, LIN. *Rostelet, Souci, ou Poul, Bur.*
Das Goldhähnchen, BECH.

Description.—This is the smallest of European birds. It is three inches and a half long, of which the tail measures one inch and a quarter. The beak is four lines long, slender, very sharp, and black; the nostrils are covered with a feather divided like a comb; the iris is dark brown; the feet light brown; the shanks eight lines in height. The forehead is

brownish yellow; a black stripe extends from the corners of the beak to the eyes; above the eyes is a white streak, and under them a spot of the same colour; the top of the head is saffron, edged on each side with a golden yellow, and surrounded in front and on the sides with a black band. The cheeks are ashen grey; the sides of the neck a yellowish green; the back, shoulders, and rump, the colour of a Green-finches; the throat a yellowish white; the under part of the body a dirty white; the wing coverts blackish grey with yellow edges on the narrow feathers, the last having little white points, those of the second row being white at the roots; the tail blackish grey, edged with green.

In the female, the top of the head is golden yellow; the forehead and wings are a plain grey.

Habitat.—When wild, these pretty little birds are at home all over the Old World. They principally frequent pine and fir woods. They appear to be birds of passage only in northern regions, going away in October, and returning in March—at least, their flight is often remarked at those seasons in Germany; and in May, the hedges are often full of them. The native ones are not birds of passage, for they are noticed all the year round. In winter they assemble in small companies, and fly about with the Tits, in search of food.

In the house the bell-shaped cage is the best. Several are sometimes put into a trellised enclosure, in which a small pine or fir tree must be placed. When reared from the nest, they may be accustomed to perch on a tree in the open room. They do not willingly leave it, and when there are many, they sit all in a row close together on a bough, and so sleep.

Food.—In the wild state, this consists of all kinds of insects, and their eggs. As they open the mouth very wide, they are able to swallow large flies. In the aviary they are easily accustomed to the paste already prescribed for the Nightingale, by giving them half-dead flies. They afterwards become fond of crushed hemp seed. They must not be deprived of insect food too suddenly, and they will always occasionally need flies, meal worms cut small, and dry or fresh ants' eggs. To keep them healthy and prolong their life, care must be taken that their paste is neither too stiff or too moist. Nor must they be allowed to touch rape or camelia seed, either of which would immediately kill them.

Breeding.—Their round ball-shaped nest is woven at the farthest extremity of a branch, and from the moss, caterpillars' cocoons, and tufts of thistle-down, of which it is composed, is very soft to the touch. It contains nine or more pale flesh-coloured eggs, the size of a pea. It is generally found in low meadows or enclosures, or the first pine tree towards the east. The young birds are easily reared on meal worms cut small, flies, ants' eggs, and wheaten bread soaked in milk. They must, however, be quite fledged, before they are taken from the nest. Those are reared with the least trouble which have been caught immediately after leaving the nest.

Mode of Taking.—To secure them, it is only necessary to take a pole, attach a limed twig to it, and strike the bird with it, when perched on a tree. This is easy, as they are by no means shy.

They can also be shot with water, although this is a dangerous undertaking, and requires much care. A fowling-piece is loaded with powder, and a wadding of grease rammed upon it. The water is carried in a bottle till the bird is seen; then about two table spoonsful of water are poured into the gun, and a second wadding inserted, though with great care, lest the water overflow. If hit at the distance of twenty paces, the bird is thoroughly wetted, and may be taken with the hand; but if there are hedges near, or a somewhat larger bird, e. g. a Chaffinch, be fired at, it often escapes. They are frequently caught in traps set for small birds, if the way to attract them be known.

They come in great numbers to the water-trap, and by their repeated cry of *Tzitt, Tzitt!* indicate the approach of sunset, and the arrival of larger birds. They generally become so tame in a few days, as to eat out of the hand. It is, nevertheless, very difficult to rear these tender birds; but once used to the house, they live long, provided only that they are neither bitten by other birds, nor hurt themselves, and that they do not swallow indigestible food.

Attractive Qualities.—These are very delightful birds for a room, on account of their small size and beauty. Their song is indeed weak, but very melodious, and resembles that of the Canary. Country people often confine these little creatures in a room, in order to be freed by their means from troublesome flies, after which they release them.

ADDITIONAL.—Some naturalists, MACGILLIVRAY among others, call the Crested Wrens Kinglets; this author places them in a separate genus, which he terms *Regulus*, and enumerates three species, known as British Birds, viz., the Fire-crowned Kinglet (*R. Ignicapillus*); the Plain-crowned Kinglet (*R. Modestus*); both rare birds; and the Gold-crowned Kinglet (*R. Auricapillus*); which is generally abundant in all parts of Britain, especially those in which are woods of pine and fir, and other close coverts. In Orkney and Shetland, however, where there are no woods, these birds are to be met with—moving in winter from place to place—in troops, and associating with Titmice, Creepers, and others small birds. Notwithstanding the abundance and general diffusion of these pretty little birds, the opportunities of attentively examining them are rare, owing to the briskness of their motions, and the secluded nature of their general haunts. MUDIE observes, that “they are so small, generally so far from the ground, and always so quick in their motions, that they are not easily seen, and never long at a time. They are continually hunting in the rough bark of the boles and main branches, and in the twigs; but they appear to prefer the latter. The command which these little birds have of themselves in the trees is really astonishing; they whisk about more like meteors than like beings of solid matter; they are now on this side, now on that; now above the twig, now hanging inverted under it; the body never at rest, and the head having generally additional motion.”

In BRODERIP’S *Zoological Recreations* will be found a very interesting account of the Golden-crested Wren, which, although it braves our severest winters, appears to be very susceptible of cold, as well as the common Brown Wren of our hedges. The Hon. and Rev. W. HERBERT informs us, that “in confinement the least cold is fatal to them. In a wild state,” he says, “they keep themselves warm by constant active motions in the day, and at night secrete themselves in places where the frost cannot reach them;” but he apprehends that numbers perish in severe winters. He once caught half-a-dozen Golden Wrens at the beginning of winter, and they lived extremely well on egg and meat, being exceedingly tame. At roosting time there was always a whimsical conflict among them for inside places, as being the warmest, which ended, of course, by the weakest going to the wall. The scene begun with a loud whistling call among them to roost, and the two birds on the extreme right and left flew on the backs of those in the centre, and squeezed themselves into the middle. A fresh couple from the flanks immediately renewed the attack upon the centre, and the conflict continued till the light began to

fail them. A severe frost in February killed all of them but one, in one night, though in a furnished drawing-room."

166. THE WHITETAIL, OR WHEATEAR.

Sylvia or Motacilla Ænanthe, LIN. *Cul Blanc*, BUF. *Der Weisschwänzige Steinschmätzer*, *Der Weiss Schwanz*, BECH.

Description.—This is a well-known bird, not only in Germany, but throughout Europe and Northern Asia. It is about the size of the Wagtail, which it resembles in appearance, except that it has a shorter tail, and a broader breast. It is five inches and a half in length, of which the tail measures one inch and ten lines. The beak, seven lines long, is black; as are also the iris and feet, which last are one inch in height. The forehead is white, and there is a streak of the same colour over each eye; a black stripe runs from the nostrils, between the eyes, to the cheeks, which are also black. The whole upper part of the body, with the scapulars, is a light ashen grey, mottled with a slight tinge of red; the feathers round the lower base of the bill are reddish white; the throat, gorge, and upper part of the breast are a light rust colour; the rest of the under part of the body is white, varied with rusty yellow on the sides, and at the vent; the wings are black, the larger wing coverts, and the hindmost quill feathers, having reddish points; the tail is white, with a black point; the two centre feathers being black almost up to the middle.

The female is reddish grey on the back, and darker on the belly than the male; the smaller wing coverts are edged with red, and the white of the tail is tinged with the same colour.

Before the first moultling, the young are spotted with brown and rust colour upon the upper part of the body, and with orange and black underneath. After the moultling, both males and females exhibit for a whole year the reddish grey on the back, characteristic of an old female.

Habitat.—When wild, they are generally to be found in mountainous or rocky regions. During their migrations, they perch in the open country, on posts, large stones, and other elevated spots, and are rarely seen on bushes or trees. They depart in the first half of September, and return in the beginning or middle of April, on the cessation of the nightly frosts.

When in the house, they must be confined in a Nightingale cage, or in a trellised enclosure. They may also be allowed to



WHEATEAR.



run about, but not before they become accustomed to their new food and habitation, as if not well tended at first, they generally die. They can seldom be tamed.

Food.—In their natural state, they eat all kinds of small beetles and flies, which they catch alive. When taken, they must be offered an abundance of ants' eggs and meal worms, that they may eat plentifully; otherwise they generally die, and, what is most extraordinary, of diarrhoea, even though they have eaten nothing of the common house food. After some time, they are fed with Nightingale's food, and occasionally with bread soaked in milk. In this manner they may be kept two years.

Breeding.—Their nest, made of hay and feathers, is generally fixed in the crevices of stone quarries; also in holes of river banks, heaps of stones, or a deserted mole-hill. The female lays five or six greenish white eggs. The young are taken when half fledged, and fed on ants' eggs, and bread soaked in milk.

Mode of Taking.—In some spot which they frequent, stakes are to driven into the ground, and covered—as well as all stones and eminences near—with bird lime; the birds may then be driven towards them.

Attractive Qualities.—Only very determined amateurs would take the trouble of taming a full-grown Wheatear. I have one, which, by means of fresh ants' eggs, has been accustomed to range the room. Its appearance is handsome, its motions active; it frequently bends its body, and spreads out its fine tail. Its song also is not unpleasant, but is interrupted in the midst by a sort of scream.

SWEET'S ACCOUNT.—“A very lively and interesting species, which arrives in this country in March, and generally leaves it in September or October, though sometimes they stay till the middle of November. I observed a pair on the 17th of November last, near the gravel-pit in Hyde Park, which were quite lively, and flying about after the insects; as brisk as if it had been the middle of summer; from their appearance, I should suppose they had been about there for some time, as they were not at all shy, but would allow me to come within three yards of them, so that they might have been easily caught in a trap, if I had wished for them; but being previously in possession of a pair, I did not trouble myself about them.

“In a wild state, these birds are chiefly to be found on hills or

commons, and very frequently in parks and rabbit-warrens ; in some counties they are so plentiful, that some hundred dozens are caught annually by the shepherds, who sell them for the sake of their flesh, which is very delicious, particularly in autumn, when they become very fat: I believe it is not generally known that *S. Hortensis*, or the Greater Pettichaps, also becomes as fat, and its flesh is quite as delicious, or perhaps more so, as it feeds almost entirely on fruit.

" I have seldom heard the Wheatear sing when wild, and when I have, its song was very soft, and scarcely to be heard, except when very near it ; though I must allow I have never been much in the places that they frequent in summer, so that they may sing more than I am aware of ; but in confinement they are almost continually in song, and sing by night as well as day ; they have a very pleasant, variable, and agreeable song, different from all other birds, and sometimes it is very loud, and they continue it a great length of time, not continually breaking off like a Robin Redbreast, and some other birds ; but their winter song is best, and most varied. A pair that I possess at present were caught in September last, and they began to sing in a few days, and have continued in song ever since, and now, while writing this, the 22d day of December, they are in full song. When in a large cage or aviary where there is plenty of room, it is very amusing to see them at play, flying up and down, and spreading open their large wings in a curious manner, dancing and singing at the same time.

" In confinement these birds require the same sort of food as the Stonechat, Whinchat, and Nightingale, feeding freely on the bruised hemp seed and bread, with some fresh, raw, lean meat, cut up in small pieces and mixed with it ; they are also very fond of the yolk of an egg boiled hard, which should be given separately, also almost all sorts of insects, except the common earth worm ; all the sorts that the Nightingale or Whinchat will eat, they are also very fond of, and the more they have given them the better, and the more they will sing : they are particularly fond of cockroaches and crickets, so that any person acquainted with a baker, may always procure plenty from his shop."

167. THE WHINCHAT.

Sylvia or Motacilla Rubetra, LIN. *Le Grand Traquet, ou Tarier*, BUF.
Der Braunkehlzle Steinschmätzer, BECH.

Description.—This pretty Cage-bird is found everywhere in the open country where there are bushes, and especially on steep declivities. It is four inches and ten lines in length, the

tail measuring one inch and a half. The beak and feet, which are nine lines high, are black. The whole of the upper part of the body is dark brown (in some old birds black), having all the feathers strongly bordered with a light rust colour, whence the bird derives a general appearance of black and rust-coloured stripes. In spring a white stripe runs from the nostrils over the eyes to the back of the ears; the cheeks and temples are black; the throat and breast yellowish red; the former edged with white on the sides and chin, or, rather, a white stripe passes round the lower part of the beak to the temples and cheeks. The belly, sides, and vent are reddish white; the smaller and the foremost greater wing-coverts are dark brown, edged with red; the hindmost are wholly or half white, and make a white spot on the wings. The quill feathers are black, edged with red, the hindmost having a white base; the half of the tail nearest the base is white, the other half dark brown; the two centre feathers having only a little white at the roots.

The female is altogether lighter in colour; the stripes about the eyes being yellowish white; the upper part of the body dark brown, with rust-coloured spots; the cheeks dark brown; the throat reddish white; the breast a dusky yellowish red, sometimes with small round black and brown spots; which, however, none of the birds have in the spring. The white spots on the wings are small.

These birds vary till the third year. The young ones, which in summer may often be seen perched on cabbage plants, and on stiff stalks in the corn fields, have, till the first moulting, rust-coloured and black spots on the upper part of the body, all the feathers being edged with white. On the belly they resemble the mother. The dark colour on the back and cheeks distinguishes the sexes. It is only in the third year that the head and cheeks become black; and at the same period the white stripe round the cheeks becomes broader.

Habitat.—This bird is most frequently met with in the outskirts of forests. It makes its appearance in the beginning of May, and leaves us at the latter end of September. In August it may be seen everywhere, sitting on the cabbage plants, or on single bushes.

In confinement it requires a Nightingale cage.

Food.—When wild, its food consists of small earth and carrion beetles, and other flying insects.

The Whinchat, like the rest of its species, can with difficulty be enticed to eat the food of the aviary. It must at first be fed only with little beetles and flies. When it is once accustomed to meal worms, it soon learns to take both ants' eggs and the usual Nightingale's food.

Breeding.—The nest is generally found among the grass, in meadows and gardens. It is made of dry grass and moss, lined with feathers and hair. The female lays five to seven beautiful light green eggs. Young birds that have been reared with ants' eggs, are better to keep than old ones, and become accustomed to the cage with much less difficulty.

Mode of Taking.—When in spring any of these birds are noticed in a meadow or ploughed field, take a few stakes, force them into the ground, cover them with limed twigs, and then drive the birds gently towards the spot. As they perch upon anything that projects, they are thus easily taken. In summer they are caught in the cabbage fields by means of nooses, spring traps, and limed twigs. If the noose be used, take a stick about three feet long, cut it to a point, and slit it, to insert crossways a piece of wood about three inches long. The noose must be suspended one inch and a half above the cross, so that when the bird perches there, it may be about breast high. The limed twig should be about three feet long, forked at the top for about four inches, and covered to the same extent with birdlime. The spring traps are to be hung on stakes or cabbage plants. A sufficient quantity of such nooses, traps, and twigs having been set in a line in a cabbage garden where Whinchats have been observed, about two or three paces apart, let the bird-catcher go to the end of the garden, and drive the birds gently before him. They will fly from one plant to another, till at last they come to the trap. The bird-catcher must then stand still a short time, till they run after the others, enter the traps, and are caught. When the captives have been released, the traps may be re-set, and the same process repeated as often as desired.

Attractive Qualities.—This pretty bird, however lively and cheerful when at liberty, is always quiet and melancholy in the house. If allowed to run about, it only moves to procure food, and resumes its place immediately, with its head sunk upon its breast. Its song is pleasant, and has much in common with that of the Goldfinch. Its best recommendation is, that

it sings not only in the daytime, but also in twilight, and till late at night. Its call notes are *Geu*, and *Tsa!*

SWEET'S ACCOUNT.—“ This species, when wild, generally frequents commons, or places where furze-bushes grow, being very fond of perching on them ; its head is flat, and the light stroke over the eyes gives it a slight resemblance to a frog, from which the specific name is derived. Its song is not one of the best ; still, among other birds, it makes a pleasing variety. It is very easily taken in a trap baited with some living insect, and soon gets familiar in a cage, where it will readily take to feed on the bruised hemp-seed and bread, if a few insects are stuck in it at first ; it is also very fond of raw lean meat, cut in small pieces, or of the yolk of a boiled egg ; it will feed on almost every kind of insect, and is particularly fond of small beetles, earwigs, and butterflies.

“ The bird I at present possess, was caught in July 1821 ; it began singing about the middle of September, and continued all through the winter, singing the greater part of the day ; in spring it sung very loud, beginning in the morning before daylight. I find it one of the tenderest species that I have yet kept ; and I have no doubt but the least frost getting at it would cause its death, as in cold weather it appears very melancholy, especially of a morning, before a fire is made in the room ; but as soon as the room begins to get warm, it enlivens, particularly if a few insects be given it ; and I believe it would subsist but a short time, if some were not given it frequently.

“ Last summer, I procured a nest of young Redstarts, which were placed in the aviary with the other birds ; as soon as they chirped for food, the Whinchat began to be agitated, and examined them minutely ; after a time, it took to feed them, and continued to do so till they were grown up. This species, and the Redstart, I find to be the most tender of any of the sorts that I have kept through the winter, but they may be managed very well by keeping them in a warm room in cold frosty weather. One that I possess at present is the most interesting bird I have ; it was taken from the nest last summer on Wandsworth Common, and bred up by hand, by which means it became very tame and bold ; when young, it was seized with the cramp, which I thought might be occasioned by the want of sand or gravel, as I suspect what they eat of that turns to lime, and forms or hardens their bones. I accordingly mixed up some stones, about the size of small shots, in its food, after it had not been able to stand for three or four days : the first day I gave it him, he became much stronger, and could stand a little before night ;

with them. I have at present a young Winchat, that was reared by hand from the nest last summer, and now, in the middle of December, it sings all day long, and a great part of the night, singing the notes of the Whitethroat, Redstart, and the female Willow Wren, and almost every other note that it hears. It has also learnt the song of the Missel Thrush, which it hears in the garden near by ; and the Nightingale's *jug, jug, jug*, and repeated it in five minutes after hearing the Nightingale sing, and it now sings it frequently, so that it is impossible to know which of the two are singing, without seeing them. The same treatment is required for breeding those birds from the nest, as I have have already mentioned in treating of some of the other species ; and afterwards, to keep them in good health, give them as many insects as possible, such as the common maggots, small beetles, cockroaches, crickets, grasshoppers, and almost all sorts of small insects."

YARRELL observes, that "the Stone-chat is common in the counties along our southern coast, to the Irish Channel ; it is also a constant resident in the south, the west, and the north of Ireland. It is observed constantly in Suffolk, Norfolk, Yorkshire, and Northumberland." Mr. SELBY observed it in Sutherlandshire ; and MACGILLIVRAY includes it in his *Catalogue of the Birds of the Hebrides*, and calls it "the Blackheaded Bush Chat ; it is also sometimes termed," he says, "the Stone Smith, Stone Chatter, and Blackytop."

TAMEABLE WHEN OLD.

169. THE ALPINE WARBLER.

Accentor Alpinus, BECH. *Motacilla Alpina*, LIN. *Fauvette des Alpes*,
BUF. *Der Alpensänger*, BECH.

Description.—This bird, which is about the size of a Skylark, has sometimes been classed with the Larks, at others with the Starlings, and at others, again, with the *Motacillæ*. It is about six inches and a half in length, of which the tail measures almost three inches. The beak is six lines long, somewhat compressed at the sides, and having the upper mandible dark brown, the lower orange yellow. The iris is yellow ; the shanks light brown, and one inch in height. The head, neck, and back, are very light or whitish grey ; the head and neck being spotted with pale brown ; the back with dark

brown, and at the sides with rust-colour. The throat is white with dark brown spots, and separated from the breast by a dark brown line; the breast whitish grey; the sides of the breast and belly, and underneath the wings, a beautiful brownish red. The belly is greenish white, traversed by indistinct dark grey wavy lines; the vent dark brown; the small wing coverts grey, with a greenish gloss. The vent feathers, and the two larger rows of coverts, are brownish black tipped with white, which produces two parallel rows of white spots on the wings. The pen feathers are brownish grey, with a border of lighter hue; the tail feathers dark brown, with each a yellow spot on the inner plume. The females and young birds are mottled with dark brown on the breast and belly, and are also darker on the back.

Observations.—The Alpine Warbler is a native of the less lofty mountain ranges which, in Switzerland and South Germany, rise at the foot of the Alps; and in the high cattle pastures is as common as the Skylark with us. In winter it descends into the valleys, and is often caught in considerable numbers near the barns and villages. It generally runs along the ground, which it does as swiftly as the Wagtail, and rarely perches upon trees. In a wild state it eats various seeds and insects; and in confinement may be fed on bread, ants' eggs, crushed hemp, and poppy seeds. In Switzerland it is usually kept in a cage, and may be preserved alive for many years. Its song is agreeable, though somewhat melancholy; and it is a very lively bird, being constantly in motion. It builds its nest on the ground, and in holes and crevices of the rocks.

ADDITIONAL.—Three specimens only of this bird, which is sometimes called the Alpine Chanter, or Accentor, are recorded to have been taken in this country: one in 1822, in the gardens of King's College, Cambridge, where a pair of these birds, very tame, were observed climbing the buttresses of the buildings, and feeding on the grass plats; the second, in a garden on the borders of Epping forest, described in the *Naturalist's Magazine* for the year 1832; and the third, in 1833, in the gardens of the Deanery, Wells, Somersetshire. YARRELL, from whom we gather the above particulars, says: “This bird on the continent does not frequent bushes, nor perch on the branches of trees, like its generic companion, the Hedge Accentor; but is almost always observed to be on rocks, or on the ground, and is remarkable for its constant tameness, either from confidence or want of intelligence,

being apparently regardless of man. The same character was noticed in the specimens both at Cambridge and at Wells, the birds allowing observers to approach unusually close to them, and when at length obliged to move, making very short flights, and always settling on some part of the nearest building. The resemblance of the steeple-crowned stone edifices of Cambridge, and at the Deanery of Wells, to the pointed and elevated rocks of their own peculiar haunts, were supposed to have been the attraction in both the localities referred to."

170. THE COMMON PIED WAGTAIL.

Motacilla Alba, LIN. *Lavandier*, BUF. *Die Weisse Bachstelze*, BECH.

Description.—This well-known bird is seven inches in length, of which the tail measures three inches and a half. The beak is five lines long, pointed, and black; the iris is dark brown; the shanks black, slender, and one inch in height. The top of the head is black; the rest of the upper part of the body, as well as the sides of the breast and the lesser wing coverts, bluish ashen grey. The forehead, checks, and sides of the neck are snowy white; the throat and the upper half of the breast black; the rest of the under part of the body white. The wings are dark brown; the coverts and hinder pen feathers having a broad margin of white, which produces a white stripe on the folded wings. The tail feathers are black, with the exception of the outermost, which is almost wholly white, and the second is marked with a wedge-shaped white spot.

In the female the white hue of the cheeks and forehead is not so pure; the top of the head is not so black, and the border of the wings is narrower and greyer than in the male. In some cases, the head and back are the same colour.

Before the first moulting, the young have a very different appearance, so much so, that of them and the young of the Yellow Wagtail, some naturalists have made a distinct species, which they call "the Grey Wagtail" (*Motacilla Cinerea*). The upper part of the body is grey; the throat and belly dingy white, and on the breast is a crescent-shaped grey, or greyish brown stripe. The wings have a whitish border. There are also varieties of this bird; some entirely white, and others mottled, or speckled with white in a peculiar manner.

Habitat.—The Wagtail is found near houses, in the open country, in mountainous or woody districts, or wherever its

peculiar food is abundant. It is a bird of passage, which, before departing, at the beginning of October, collects in great numbers, like the Swallows. It returns as soon as the first warm days of February or March entice from their holes the flies, which form its food, and the aquatic insects are to be caught in the brooks.

It may be confined in a cage, or allowed to range the room, though in either case plenty of sand must be provided, as it is a dirty bird, and its excrement is both fluid and copious.

Food.—When wild, it feeds on gnats, aquatic insects, and their larvæ, flies, and such insects as tease the cattle, round which it may often be seen flying. It also follows the plough, in order to devour the insects which are turned up.

In the aviary it must at first be fed on ants' eggs, meal worms, and different insects, but will soon become used to the universal paste, or will eat bread and meat. If kept in a cage, it needs the Nightingale's paste.

Breeding.—The Wagtail builds twice or thrice a year, in all kinds of holes and crevices; between stones, in hollow trees, under roofs, &c. Its nest is loosely composed of grass roots, moss, hay, &c., and lined with hair, wool, and swine's bristles. The female usually lays five or six bluish white eggs, spotted with black. If the young ones be reared from the nest, they become so tame, as to fly in and out of the aviary; and while building their nest and breeding in it, will forage for their own subsistence.

Diseases.—The diseases to which the Wagtail is most liable, are diarrhoea and atrophy, though this, as well as the two following species, may often be preserved alive for four years or more.

Mode of Taking.—If snow should happen to fall as late as March, these birds may be taken by clearing a spot of ground, and setting it with limed twigs, baited with meal worms. For this purpose, a spot should be chosen which the bird has been observed to frequent.

Attractive Qualities.—The Wagtail is recommended to the amateur both by its lively disposition, which it expresses by the well-known motion of its tail, and its song, which, though not loud, is varied, and lasts throughout the year. I always keep a Wagtail in my aviary, and in the chorus of the Black-cap, Bluethroat, Lark, and Linnet, it seems to take the alto

part. It is also useful in destroying flies, for which its quick gait and motions seem especially fitted.

ADDITIONAL.—It appears that the bird commonly known as the Pied, White, Black and White, Water, or Winter Wagtail, or, as some say, the Dishwasher, is not an identical species with that which BECHSTEIN describes under the first of these names, the *Motacilla Alba* of LINNÆUS, although several naturalists have so considered it. The following observations by GOULD upon this disputed point, were first published in the *Magazine of Natural History* for 1837 :—“ While engaged on this tribe of birds, during the course of my work on the Birds of Europe, I was surprised to find that the sprightly Pied Wagtail, so abundant in our islands at all seasons, could not be referred to any described species ; and that it was equally as limited in its habitat ; for besides the British Islands, Norway and Sweden are the only parts of Europe whence I have been able to procure examples, identical with our bird, whose place in the temperate portions of Europe is supplied by a nearly allied, but distinct species, the true *M. Alba* of LINNÆUS ; which, although abundant in France, particularly in the neighbourhood of Calais, has never yet been discovered on the opposite shores of Kent, or in any part of England. As, therefore, our bird, which has always been considered as identical with the *M. Alba*, proves to be a distinct species, I have named it after my friend, W. YARRELL, Esq., as a just tribute to his varied accomplishments as a naturalist.”

KNOX, in his *Ornithological Rambles*, has written at considerable length on these birds ; we quote a portion of his account :

“ On fine dry days in March, I have frequently seen Pied Wagtails approaching the coast, aided by a gentle breeze from the south, the well-known call-note being distinctly audible under such favourable circumstances from a considerable distance at sea, even long before the birds themselves could be perceived. The fields in the immediate neighbourhood, where but a short time before scarcely an individual was to be found, are soon tenanted by numbers of this species, and for several days they continue dropping on the beach in small parties.

“ About the beginning of September, an early riser visiting the fields in the neighbourhood of the coast, may observe them flying invariably from west to east, parallel to the shore, and following each other in constant succession. These flights continue from daylight until about ten in the forenoon ; and it is a remarkable fact, that so steadily do they pursue this course, and so pertinacious are they in adhering to it, that even a shot fired at an advancing party, and the death of more than one individual, have



GREY WAGTAIL.

failed to induce the remainder to fly in a different direction ; for after opening to the right and left, their ranks have again closed, and the progress towards the east has been resumed as before."

171. THE GREY WAGTAIL.

Motacilla Boarula, LIN. *Bergeronette Jaune*, BUF. *Die Graue Bachstelze*, BECH.

Description.—This beautiful bird is about the size of the foregoing, being seven inches in length, of which the tail measures nearly four inches. The beak is black; the iris brown; the feet dark flesh colour, and nine lines high. The whole upper part of the body, with the smaller wing coverts, is dark grey, the head being somewhat mottled with olive green. The rump is greenish yellow; a white stripe runs above the eyes; another of the same colour passes from the root of the beak to the neck; and a black one from the root of the beak to the eyes. The throat is black; the breast and the lower part of the body are exceedingly bright yellow. The wings are black; the larger coverts white, the rest edged with ashen grey. In the like manner the hindmost pen feathers are white at the root, and bordered with the same colour, which produces three white lines upon the wings. The tail is long and black, but the outside feather is white, and the next to it only bordered with black.

The colours in the female are altogether lighter; and the throat is not black, but pale reddish yellow. Males also, of from one to two years' old, have the black of the throat mottled with white.

Habitat.—The Grey Wagtail is at home all over Europe. It may frequently be met with, though always alone, in woody and mountainous districts, watered by pebbly brooks. It is a bird of passage, returning at the end of February or beginning of March; though in mild winters, it has been known to remain, taking up its abode near dunghills or warm springs. In confinement it must be placed in a Nightingale cage, and treated like that bird; yet is it so delicate, as rarely to live above two years, even with the greatest care.

Food.—In a wild state, it feeds chiefly on aquatic insects. In confinement, the old birds, which it is desired to tame, must be fed at first on ants' eggs and meal worms; though they will in the end eat the universal paste, if pieces of hard-boiled egg be mixed with it.

Breeding.—They breed twice a year, and build by the water side, in mill dykes, heaps of stones, &c. The nest, which is more carefully constructed than that of the Common Wagtail, is made of grass stalks and moss, lined with hair. As early as March, the female lays five or six white eggs, mottled with flesh colour. The young birds may be reared on ants' eggs, and bread soaked in milk.

Mode of Taking.—This bird may be taken, by placing across or near streams which it frequents, poles, to which limed twigs, baited with meal worms, are attached.

Attractive Qualities.—In general, this bird bears a strong resemblance to the Common Wagtail, but it is handsomer, and has a stronger voice. Although its song consists only of two notes, yet its clear round tones render it not unpleasant.

ADDITIONAL.—By MACGILLIVRAY, this bird is called the Grey and Yellow Wagtail; he describes it as a remarkably elegant and beautiful species, not quite so rotund as the Pied Wagtail, which, however, it exceeds somewhat in length, the tail being proportionally longer. “The species,” he says, “is permanently resident in this country, although in most of the northern districts it disappears in winter. It frequents the margins of streams, pools, and lakes; and is generally distributed in the lower and more cultivated parts.”

MUDIE tells us, that “the Grey Wagtail leaves the southern parts of the country (in which it is called the *Winter Wagtail*) about February, or the early part of March, the cause which changes the plumage appearing to operate simultaneously in prompting the migration, as the sexes resemble each other as long as they remain in the south. Many of them halt by the upland streams in the central and northern parts of England; but others pass into Scotland, where they penetrate to a considerable distance north, although, as they keep to more retired situations, they are not so often seen in proportion to their numbers as the Pied Wagtails. They are also more confined to the clear streams in the open wastes, where they feed upon waterflies, insects, and larvæ.

* * * * *

“It does not appear that they ever summer or nest in the south; and it is worthy of remark, that these indigenous water-insect-consuming birds retire northwards in summer, and leave the waters of the south and south-east to the aquatic warblers. Those resident insectivora are suited to the open air, and the warblers to the shade; and, accordingly, they alternate with each other in the seasons. The warblers retire to climates in

which they find shade in the winter; and the resident birds betake themselves to the north in the summer, where the deep shade and the rank vegetation by the sides of the pools and streams do not interfere with their pedestrian habits."

The following cut will show the difference in structure between the foot of the Lark and Wagtail, the first being adapted for running upon or rising from the grass; and the latter from the soft muddy banks or pebbly strands, where the bird to which they belong finds its appropriate food and habitation.



172. THE YELLOW WAGTAIL.

Motacilla Flava, LIN. *Bergeronette de Printemps*, BUF. *Die Gelbe Bachstelze*, BECH.

Description.—This bird, which resembles the female of the preceding species, but has a shorter tail, is six inches and a half in length, of which the tail measures two inches and a half. The beak is blackish brown; the iris nut-brown; the shanks black, and ten lines in height. The upper part of the body is reddish grey, with a strong tinge of olive green, which on the rump changes to Siskin green. The head is rather grey than green; and a reddish white streak passes over the eyes. The under part of the body is a fine yellow, and in old birds sulphur colour, darker on the throat and breast, and lighter on the belly and vent. The wings are dark brown, and, as well as the larger coverts, edged with reddish white, which produces two white streaks on the wings. The tail is black, though the two external feathers are quite white, with the exception of a black stripe on each.

In the female the back is more grey than green; the belly and vent are not so fine a yellow; the throat is whitish, and, as well as the belly, spotted with orange.

I have obtained from a fowler this spring a peculiar variety of this bird. The upper part of the body was almost slate-coloured; the stripe over the eyes, and those across the wings,

being a dirty white, and the under part of the body light red. It is still alive, and by its song has shown itself to be a male.

Habitat.—This species of Wagtail is better known than the preceding, as it is found in the cattle pastures in all the level districts of Europe. In September it collects in large flocks before departing for a warmer climate, uttering meanwhile a loud cry of *Sipp, sipp!* It returns about the end of March. In confinement it may be treated like the Grey Wagtail, but is not so delicate a bird.

Food.—When wild, its food consists of such insects as generally fly about the cattle. In the aviary it may be treated like the preceding species, though it thrives better if a little hard-boiled egg, chopped small, be mixed with the first universal paste.

Breeding.—This bird builds twice a year on the banks of streams, deserted mole-hills, or, like the Lark, among the corn and grass. The nest is composed of an external layer of grass stalks, lined with wool, and the female lays five or six greyish white eggs, spotted and mottled with reddish grey. The young birds, which are much lighter on the under part of the body than the old ones, and bear a strong resemblance to the female, may be reared like those of the preceding species.

Mode of Taking.—The Yellow Wagtail is not an easy bird to catch, and the surest plan is to set limed twigs about the nest. The plan mentioned for taking the Common Wagtail is, however, sometimes successful.

Attractive Qualities.—These birds, of which I always keep several, are worthy of a place in the aviary, on account both of their beauty and of their song. They are particularly useful in destroying flies, which they do in a peculiar manner, creeping up on them with all the caution of a cat.

ADDITIONAL.—It will be seen that MACGILLIVRAY has applied the term Yellow Wagtail to the preceding species; the one here described by BECHSTEIN, the true *Motacilla flava* of LINNÆUS, he calls the Blue-headed Wagtail or Quaketail. It is a rare bird in this country; the Common Yellow Wagtail of British ornithologists, however, with which it was for a long time confounded, is plentiful enough; this, too, is a migratory bird, arriving here towards the end of March, and leaving in September. It has been proposed, for distinction sake, to name this bird RAY's Wagtail, after the naturalist who first described and identified it as a species distinct from the continental bird;

and as GOULD may fairly claim the priority of discovery in the case of the more rare foreign visitant, it has been argued that it should be called GOULD's Wagtail, or, as MACGILLIVRAY has it, Quaketail. This naturalist places these two species in a genus by themselves, which he terms *Budyes*, calling the one *B. Rayi*, or Green-headed Quaketail; the other, *B. Gouldi*, or Blue-headed Quaketail, the colour of the head forming, as he says, the main distinction between the two birds. Spring or Summer Wagtail, Oatseed Bird, or Oatear, are also terms applied to the first named, and in this country more familiar species, of which, it appears, but little is known on the Continent. "This bird," says NEVILLE WOOD, "has received its popular designation, not as some suppose on account of its feeding on oats or any other corn, for it is wholly insectivorous, but because those extensive upland districts, which it frequents, are more favourable to the growth of oats than to any other kinds of grain, and because, moreover, it resorts to those corn-fields on its first arrival in Britain.

"Though the Spring Oatear is not a typical *Motacilla*, yet it does, nevertheless, wag its tail; it has not, however, so long a tail to wag, and altogether shows a decided departure from the true Wagtails. Almost every one who lives in the country must have remarked that the tail is not merely waved up and down, but that it is accompanied with a kind of lateral motion, or, at least, that the tail is partially spread at the time of wagging, which gives it a flitting, unsteady appearance."

173. THE OX-EYE, OR GREATER TITMOUSE.

Parus Major, LIN. *Grosse Mésange ou Charbonnière*, BUF. *Die Kohlmeise*, BECH.

Description.—This well-known bird is about the size of the Blackcap, being five inches and ten lines in length, of which the tail measures two inches and a half. The beak, as in all birds of this species, is conical, hard, sharp pointed, and not serrated; the iris is dark brown; the feet lead colour, and nine lines in height; the claws strong, and adapted to climbing. The top of the head and the throat are bright black, and a stripe of the same colour passes over the nape of the neck; the cheeks and temples are white. The junction of the neck and back is greenish yellow mixed with white; the back is a beautiful olive green; the rump light grey; the breast and belly yellowish green, divided down the middle by a broad black stripe. The vent is black in the middle, and white at

the sides; the thighs white, spotted with black; the sides pale olive green. The wing coverts are light brown; the larger ones being tipped with white, which produces a white stripe on the folded wings. The pen feathers are blackish; the foremost, with the exception of the two first, being edged on the upper side with light green, on the under with white, and the hindmost having above a border of olive green, and below of white. The tail is blackish, and somewhat forked; the two centre feathers are tinged with light blue, and the external ones are white on the outer and part of the inner plume. The rest are all edged with light blue, and the second is, in addition, tipped with white.

The female is smaller; the black and yellow colours are less bright, and the stripe on the breast is narrower, and does not extend so far down the belly. The last fact serves as a characteristic by which we may distinguish the young males from the females, which they very much resemble.

Habitat.—The Ox-eye is found throughout the Eastern hemisphere, and principally frequents mountains and districts which are well wooded, and at the same time not devoid of cultivation. It is not a bird of passage, though it collects about October in flocks, which migrate in search of food from one wood to another. This is the period at which the Ox-eye is most exposed to the attempts of the fowler. In March the flocks again separate into pairs, which begin to build and to propagate their species.

In the aviary the Ox-eye may be kept in a large bell-shaped wire cage, into which a round cavity of some kind is introduced, to serve as a sleeping-place. If allowed to range the room with other birds, it should be abundantly supplied with food; as if, when pressed with hunger, it has once killed some small bird, and eaten the brain, of which it is exceedingly fond, it becomes very ferocious. I have known of an instance in which an Ox-eye attacked and killed a Quail. The assertion of the bird-sellers that those Ox-eyes only which have forked tails exhibit these carnivorous propensities, is not founded on fact; though daily experience assures us that there is a considerable difference of natural disposition between birds of the same species.

Food.—The Ox-eye feeds upon insects, seeds, and berries, and destroys great numbers of bees, flies, gnats, grasshoppers,

moths, and caterpillars. Like the Woodpecker, it climbs trees in order to look for larvæ, insects' eggs, and woodlice under the bark. In autumn and winter it eats various kinds of seed and grain, especially hemp seed, oats, beech mast, fruit kernels, nuts, the seeds of coniferous trees, and even carrion. It holds its food between its claws, and tears it to pieces with its beak.

In confinement the Ox-eye eats whatever comes to table—meat, bread, cheese, and vegetables, as well as lard, tallow, filberts, and walnuts, and the universal paste; and if well attended to, is not a delicate bird. The better it is fed, the more constant also is its song. It drinks a good deal, and is fond of bathing.

Breeding.—The Ox-eye builds its nest in the tops of hollow trees, and often avails itself of the deserted habitations of the Raven, Magpie, or Squirrel. It lays its eggs, which are eight or ten in number, and white, with irregular dark brown spots of various forms and sizes, on an artfully composed layer of moss, wool, and feathers. The young birds, which till the first moulting are pale yellow on the under part of the body, do not leave the nest till full grown.

Diseases.—Those which are kept in a cage, and fed with hemp seed, are often subject to giddiness, which may, however, be cured by confinement in a very small square cage, only allowing the bird to range the aviary. Both gout and decline are also said to arise from the immoderate use of the same food. With care they will live in confinement from eight to ten years.

Mode of Taking.—The capture of this bird, with others of the same species, is considered by fowlers to be the most agreeable part of their profession. It is accomplished in several ways; of which I shall, however, subjoin only two. In spring and autumn the fowler repairs to orchards and other places frequented by Tits, with a decoy-bird confined in a small square cage. The cage is placed upon the ground and surrounded by limed twigs in an oblique position, when the Tits, attracted by curiosity, or some other motive, fly to make acquaintance with their new comrade, and are caught. This mode is rendered all the surer if a whistle, made of a goose's leg-bone, be used; as this makes a louder sound than the natural call, and never fails to attract all the Tits within hearing.

In winter, what is called the Tit-trap, baited with nuts, oats, or lard, may be used. This is a small box, one foot in

length, and eight inches in breadth and height; the walls of which may be formed either of boards painted green, or of elder sticks, fastened to uprights at the four corners. In the latter case only the floor and cover of the trap need be solid; and the corner should open and shut on hinges of packthread. A small stick is vertically fixed in the middle of the floor; across the top of this lies another, to one end of which is attached half a walnut, and to the other a piece of lard; the whole being surmounted by another vertical stick, which holds the lid of the trap open at the height of three or four inches. If the bird alights upon the cross stick, and begins to peck at the bait, it brings down upon itself the cover of the trap, and is caught. The trap may be placed in a tree, upon a layer of oat straw, which serves to attract the birds even from a considerable distance. Like all Tits, the Ox-eye may frequently be caught in the water-trap, especially between 7 and 9 A.M., and 4 and 5 P.M. In autumn it is often taken in nooses, especially if baited with elder and service berries. These nooses should, however, be made of horse-hair, as the bird, when it feels itself caught, will bite through those of any other material.

Attractive Qualities.—These birds are recommended to the amateur not only by their beauty, activity and cheerful disposition, but also by their varied and exceedingly melodious song, which consists of the frequent repetition of the syllables, *Si,—tzi,—da.* *Si,—tzi,—da.* *Stiti, Stiti,* intermixed with the double call, *Fink, fink.* *Tzitzeer.* We may conclude that, the Ox-eye, if reared from the nest, would not be wanting in docility, from the fact that even old ones evince a readiness to adopt the songs, and especially the call notes, of other birds.

They are also often taught to perform various tricks; as, for instance, to draw up their food and water by a chain; to move a cylinder, which appears to be worked by two miners; or to hop after a nut suspended by a thread.

ADDITIONAL.—The Great Titmouse, the Black-headed Tomtit, the Blackcap, and the Ox-eye, are terms almost indiscriminately applied to this bird, which, although by no means the largest of the *Parus*, or Tit genus, is yet generally considered as the “chief of its clan,” as the Scottish naturalist has it. This well-known species is very generally distributed throughout the wooded and cultivated districts of England and Scotland; it is somewhat

rare, however, in the northern parts of the latter country. THOMPSON reports that it is indigenous to Ireland. We must content ourselves with a very short extract from MUDIE's account of this bird :—“ The Great Tit has a chattering rather than a singing voice; but it has considerable flexibility of utterance. As it hunts in the trees, its chatter, though not loud, is harsh and grating, resembling that which is produced by the filing of iron; but in the pairing time it has a note not very dissimilar to that of the Chaffinch; and the alternation of the note with the chatter, makes a sort of rude song, but that song continues but a short time.”

“ The Great Titmouse,” says WHITE, “ driven by stress of weather, much frequents houses; and in deep snows, I have seen this bird, while it hung with its back downwards (to my no small delight and admiration), draw straws lengthwise from out the eaves of thatched houses, in order to pull out the flies that were concealed between them, and that in such numbers, that they quite defaced the thatch, and gave it a ragged appearance.”

We will conclude our account of this bird, with a characteristic little sketch from the letters of RUSTICUS on *the Natural History of Godalming* :—“ The next object of attention was a Titmouse, of the large black-headed kind, swinging himself about like a rope-dancer, and whistling out his sing-song just like a fellow sharpening a saw. To my surprise, the gentleman entered an old Magpie's nest, to which I had paid frequent friendly visits during the previous spring; he immediately came out again, and jumped about, sharpening his saw as before. One might almost as well handle a hedgehog as a Magpie's nest; in this instance, some cuttings of gooseberry bushes, skilfully interwoven into an arch above it, rendered it rather more untempting than usual. I was meditating how to commence the attack, when another Tomtit flew out in a great choler, and rated at me as though I had already robbed her. After a good deal of trouble, during which the slender fir-top was swinging about with me in the breeze, I succeeded in obtaining a peep into the nest; there was nest within nest; the cosiest, softest, warmest little nest, with eight delicately speckled eggs, at the bottom of the Magpie's more spacious habitation. I declined meddling with them; whether on account of the awkwardness of my situation, or the intervening gooseberry bushes, or the cruelty, I will not say.”

174. THE COLE TIT.

Parus Ater, LIN. *Petite Charbonnière*, BUF. *Die Tanenmeise*, BECH.

Description.—The Cole Tit is four inches and two lines in

length, of which the tail measures one inch and three quarters. The beak, which is three lines long, is black, lighter at the point; the iris blackish brown; the feet eight lines high, and lead-coloured. The top of the head and neck are black; from the back of the head down the neck runs a broad white stripe; the cheeks, with the sides of the neck, are white, and form, when the bird is perched, a three-cornered white spot. The back is dark ashen blue; the rump a greenish ashen grey. The throat, as far as the upper part of the breast, is black; the last black feathers being tipped with white. The breast is white; the rest of the upper part of the body also white, tinged with red. The smaller wing coverts are like the back; the larger blackish, tipped with white, whence arises a double white stripe. The pen feathers are a brownish grey, bordered with a whiter shade; the tail feathers of the same colour.

The female is with difficulty distinguished from the male. The only difference is, that she is somewhat less black on the breast, and less white on the side of the neck.

Habitat.—This Tit may be met with wherever there are pine forests. In autumn, winter, and spring it may be sometimes seen in other woods and in gardens, but only during its migrations. Large flocks pass in the winter, from one pine forest to another. It seems to like the company of the Gold-crested Wren, which is always found in its flocks, as well as one or two of the Crested Tits, which serve as guides.

It is sometimes confined in a cage, but it is better when allowed to have the run of the room among the other birds.

Food.—In a state of nature, the Cole Tits eat insects and their eggs, and larvæ, as well as the seeds of all species of pine and fir. As the snow and hoar frost during the winter frequently deprive them of sustenance, nature has taught them to lay up in time of plenty a provision for the future. They conceal a stock of seeds under the rough bark of the fir tree, to which they have recourse in necessity. This instinct may be noticed in these birds when in confinement, as they endeavour to hide their superfluous food in niches and crevices from other birds, and sedulously visit their hoards, to be sure of their safety. The Blue Tit and the Ox-eye manifest somewhat of this tendency, and often carry their food into a corner, but do not hide it with as much care and forethought as the Cole Tits. They are generally fed with the universal paste.

Breeding.—The Cole Tit builds its nest of moss, lined with hair and fur, in a deserted mole-hill, or mouse-hole; sometimes under the overhanging edge of an old wheel rut, and occasionally in a crevice of a tree or wall. It lays, twice a year, six or seven white eggs, spotted with light red. The young birds resemble their parents, except that the black is paler.

Diseases.—The commonest disease among the Cole Tits is decline, which may sometimes be prevented by giving them fresh ants' eggs, especially at the period of moulting. I once kept one six years, which was allowed to run about the room; it became at last giddy and blind, and died of old age.

Mode of Taking.—This bird may be caught like the last mentioned; but being less shy, an even easier method is often available. A limed twig is tied upon a pole, with which it is frequently possible to touch and catch the bird as it is perched upon the tree. Its call is *Tzip-toen!* Like most Tits, it is a delicate bird, and often dies before inured to the food of the aviary.

Attractive Qualities.—It is an engaging and amusing bird, always in motion; bold, lively, never ceasing to hop and flutter. Its song is a number of harsh, ringing, unconnected notes, relieved by a clear, sonorous, *Tzif, tzif!* repeated twenty times in succession.

ADDITIONAL.—The Cole Tit, Coal Titmouse. This bird is the smallest British species of the genus; in form, as well as in colour, it is very similar to its congeners, from which, however, the practical ornithologist may readily distinguish it. In most, if not all the counties of England, it is permanently resident, and, according to THOMPSON, is generally distributed over Ireland; while MACGILLIVRAY includes it among the birds found in the neighbourhood of Edinburgh, and SELBY says that it is common, and even abundant, in the woods and pine forests of the north. NEVILLE WOOD observes, that "the Cole Tit is said not to be so plentiful in England as the Blue and Marsh Tits; but in Derbyshire I think it is at least as common. While the Marsh Tit is busy exploring the low, swampy, reedy grounds, the present species remains in the dry upland districts, exhibiting, at the same time, that partiality to thick woods and copses, which is observable throughout the genus. In these upland districts almost any thick wood will suit it, but I have ever observed the oak to be its favourite tree. Either in plantations of young oaks, or among isolated trees of a larger growth, it is almost sure to

be met with, and also, but not so commonly, in pine and fir woods."

YARRELL says, "like the Blue Tit, this species is constantly in motion, sometimes associated with Gold Crests and Lesser Red-poles, forming a small flock, and roving from tree to tree, in active search for those small insects, and the seeds of various evergreens upon which they principally subsist. They appear to bear cold weather with indifference.

"This bird is at once distinguished from the Marsh Tit, by the white patch on the nape of the neck, and by the white spots in the wing coverts, which are always present, neither of which are to be found in the Marsh Tit at any age."

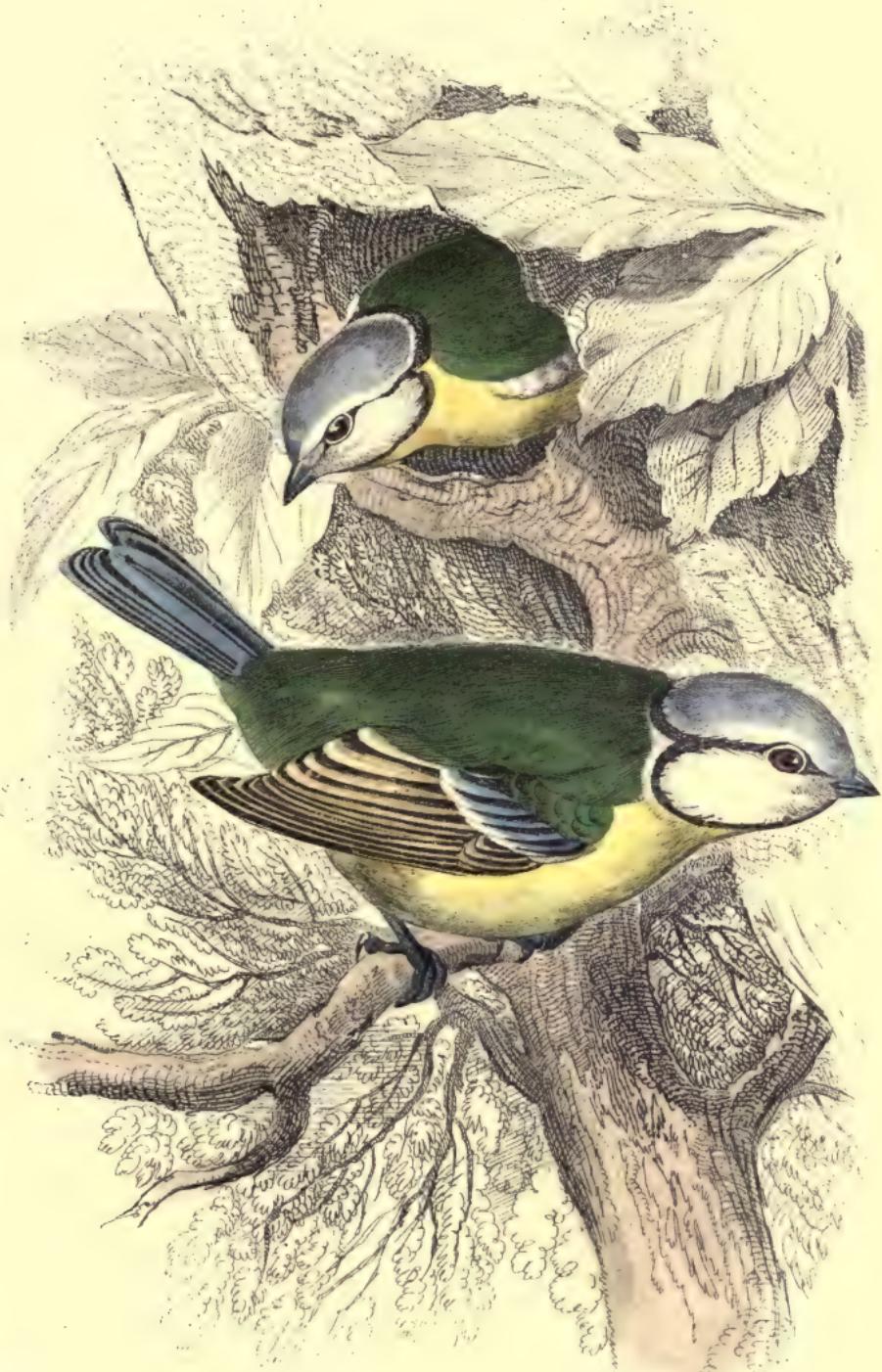
According to HEWITSON, "when the Cole Tit breeds in the holes of trees, it is usually at a less elevation than the other species, and sometimes even in cavities which occur amongst the exposed roots."

"The song of the Cole Tit," observes MUDIE, "is not indeed one of many notes, or of mellifluous inflexions—it is little else than the same note repeated four or five times, but with so much variety of pitch and tune, as to form a sort of cadence, which would make a good variety anywhere, as it is shrill and clear. The bird sings in the noon tide heat, when most birds, and especially those of the open wastes, with which the haunts of this species are interspersed, are usually silent. While the Cole Tit is singing away in the plantation of half grown pines, often heard, but seldom seen, the Marsh species may be seen flitting about among the long fragrant broom, which often grows thick in the neighbourhood: but as the one is heard while the other is seen, that causes them to be sometimes confounded."

175. THE BLUE TIT, OR TOM TIT.

Parus Cæruleus, LIN. Mesange Bleue, BUR. Die Blaumeise, BECH.

Description.—This very pretty bird is four inches and a half long, of which the tail measures two inches. The beak is three lines long, blackish except at the edges and point, which are white; the iris is dark brown; the feet lead colour, and eight lines in height. The forehead and cheeks are white; and a white stripe passes from the forehead over the eyes, and encircles the top of the head, which is a beautiful blue. A black stripe runs between the eyes: the throat is black; and between it and the neck is a dark blue stripe, which surrounds the head. There is a white spot on the nape of the neck; and the back is light Siskin green, the feathers being of a more silky texture than in most birds of this genus. The under



Stewart delt.

Lizars sc.

BLUE TITMOUSE

part of the body is light yellow, with the exception of a longitudinal light blue stripe which arises from the middle of the breast, and passes between the legs. The wing coverts are light blue, the larger ones being tipped with white: the tail is azure blue.

The female is somewhat smaller: the stripes on the head are not so distinct: the blue of the plumage is tinged with ashen grey, and the stripe on the belly is hardly perceptible.

Habitat.—The Tom Tit frequents oak and beech woods, though in autumn and winter, when migrating in great numbers in search of food, it may often be seen in gardens. In confinement, it may, like the Ox-eye, be allowed to range the room, as its plumage is thus seen to the best advantage, and at night may be driven into a cage or other appointed sleeping place. It is as quarrelsome and malicious as the Ox-eye—but, though much addicted to teasing its companions, is not strong enough to inflict any serious injury upon them.

Food.—In a wild state the Tom Tit eats insects and their eggs; and in autumn, berries. In confinement, it may be treated like the Ox-eye; and if fed, when first caught, with a little crushed hemp seed, soon becomes accustomed to the food of the aviary. It is very fond of bathing.

Breeding.—It builds its nest in the hollow branches of lofty trees, lining the hole which it selects for the purpose, with moss, hair, and feathers. The female lays eight or ten reddish white eggs, mottled and spotted with brown; and the young birds resemble the parents, except that the colours of their plumage are not so bright.

Diseases.—The majority of those which are caught in winter die, after a few days of confinement, of dizziness, which incapacitates them for finding their food.

Mode of Taking.—The Tom Tit may be caught in the same manner as the Ox-eye.

Attractive Qualities.—These are chiefly its beauty and lively disposition, as its song consists only of a few indistinct and not very melodious passages, in which a few higher notes may occasionally be distinguished. It soon becomes tame, and lives for two or three years.

ADDITIONAL.—This bird has with us a great variety of names, such as the Blue Titmouse, Blue-cap, Blue-bonnet, Tom-tit, Hick-wall, Billy-biter, Ox-eye, &c. It is perhaps the most com-

mon species of its genus, and may be met with almost every where ; a truly beautiful and lively bird, frequenting mostly small woods, orchards, and gardens. "In Britain," says NEVILLE WOOD, "wherever there are houses or farms, there our lively and elegant little companion, the Blue Tit, is sure to be also, and that, too, in great abundance, notwithstanding the strenuous efforts of ignorance, seconded by cruelty, which have for centuries been directed, without the slightest cause, to the destruction of one of the liveliest of the feathered race, and one of the most useful. Its movements are inconceivably rapid and elegant, and, except when nipped by a severe frost, it is in constant motion, continually seeking its minute insect prey on the barks and branches of trees, in the manner of the Warblers and Gold-crested Kinglet, often clinging to the sprays with the head downwards. It holds with the greatest ease on the smooth trunks of trees, and also on walls and window frames, where it frequently seeks its insect food."

The eggs found in the nest of this bird are said to be sometimes very numerous ; PENNANT mentions from twelve to fourteen ; MR. HEYSHAM has found the latter number ; and MR. HEWITSON records an instance in which the nest contained as many as eighteen ; from eight to ten, however, as stated by BECHSTEIN, appears to be the more common number. The Blue Tit is a very spirited bird, and defends its nest and eggs against all enemies, with great courage and perseverance, as is well known to birds' nesting boys, who have given it the name of Billy Biter, from its sharp impressions upon their intruding fingers. When her home and progeny are attacked, the mother bird puffs out her feathers, and hisses like an angry kitten. "I was lately exceedingly pleased," says KNAPP, "in witnessing the maternal care and intelligence of this bird ; for the poor thing had its young ones in the hole of a wall, and the nest had been nearly all drawn out of the crevice, by the paw of a cat, and part of the brood devoured. In revisiting its family, the bird discovered a portion of it remaining, though wrapped up and hidden in the tangled moss and feathers of their bed, and it then drew the whole of the nest into the place from whence it had been taken, unravelled and re-settled the remaining little ones, fed them with the usual attention, and finally succeeded in rearing them. The parents of even this reduced family laboured with great perseverance to supply their wants, bringing them a grub, caterpillar, or other insect, at intervals of less than a minute during the day."

176. THE MARSH TIT.

Parus Palustris, LIN. *Mesange de Marais, ou Nonette de Cendrée*. BUR.
Die Sumpfmeise, BECH.

Description.—The Marsh Tit is four inches and a quarter in length, of which the tail measures two inches. The beak is four lines long, and black; the feet lead coloured, and five lines in height. The top of the head is black: the cheeks and temples white; the throat black. The upper part of the body is brownish grey; the under part dirty white, tinged with red at the sides and vent. The wings and tail are blackish grey, edged with reddish white.

In the female, the black on the throat is hardly perceptible.

Habitat.—This bird frequents gardens and groves throughout the year: but in winter, collects in flocks, which wander from place to place in search of food. In confinement, it may be allowed the free range of the aviary. It is a delicate bird, and when first caught requires considerable attention.

Food.—In a wild state, it eats seeds, insects, and elderberries. In the aviary it may be treated like other Tits; and may be brought to eat the universal paste, by means of ants' eggs or elderberries. The seeds of the sunflower will answer the same purpose; and this food is said to have a favourable effect on the bird's longevity. It is also fond of oats, and hemp seed.

Breeding.—The Marsh Tit builds its nest in hollow trees, of moss and grass, lined with hair and feathers. The female lays ten or twelve eggs, which are a rusty white, spotted with orange.

Mode of Taking.—In winter, this bird may easily be taken in the Tit trap, if baited with nut kernels and oats. A still surer method is to fix limed twigs on the sunflower blossoms: which, if growing in a garden not frequented by these birds, may be carried to some place where they have been often observed.

Attractive Qualities.—The Marsh Tit is a handsome bird; and its song, though weak, is agreeable. It is rendered somewhat remarkable by the syllables *deay deay, hitzi, iltz, iltz*, which also form its call-notes in the pairing season. I have never been able to keep one of these birds longer than two or three years.

ADDITIONAL.—The Black headed Tom Tit and the Marsh Tit-mouse are names by which this bird is commonly known; the

species, although plentiful in many localities, is not so generally distributed as those already described. With us they frequent mostly low tracts of swampy land, marshes, and moist meadows, where there are plenty of old willows and alders, and low thickets, amid which they love to breed and nestle, visiting occasionally orchards, and gardens, and cultivated tracts, in search of insect food. These birds, like the other members of the Tit family, remain in this country throughout the year ; they are active and sprightly birds, constantly flitting from place to place, feeding on insects in their various stages, not excepting bees, and occasionally on seeds, being very partial to those of the sunflower and thistle. SELBY says that they will eat stale flesh. Their call note is a single sharp chirp, like that of the other Tits, from which their voice is only to be distinguished, says YARRELL, when they put forth a rapid succession of notes, more remarkable for chattering gaiety than quality of tone. MONTAGUE states, that he has seen this bird excavating the decayed part of the willow, carrying the chips in its bill to some distance, always working downwards, and making the bottom, for the reception of the nest, larger than the entrance. The nest, according to this authority, is composed of moss and thistledown ; sometimes a little wool ; and lined with the down of the thistle.

TAMEABLE ONLY WHEN YOUNG.

177. THE CRESTED TIT.

Parus Cristatus, LIN. *Mesange Huppée*, BUß. *Die Haubenmeise*, BECH.

Description.—This bird, which is about the size of the foregoing, is four inches and a half in length, of which the tail measures one inch and one-third. The beak is four lines long, and black ; the feet lead-coloured, and seven lines in height. The head is surmounted by a pointed crest, almost one inch in height, which consists of black feathers, edged with white, and of progressively greater lengths. The forehead is mottled with black and white ; the cheeks are light grey, edged with black below and behind. A broad reddish-white stripe runs from the corner of the beak to the nape of the neck ; the throat is black, and the neck surrounded by a black collar. The back is reddish grey ; the breast and belly whitish ; the sides inclining to red ; the wings and tail greyish brown. The female may be distinguished from the male, by the fact that its crest is not so high, nor the black of the throat so bright.

Habitat.—The Crested Tit, which is hardly so common as the species already enumerated, frequents woods of coniferous trees, and seems to prefer spots where the juniper tree abounds. It is a shy bird, concealing itself deep in the underwood. In confinement, it may be treated like the Tom Tit, though a much more delicate bird, and far less easy to tame.

Food.—In a wild state, its food is the same as that of the Ox-eye. It will soon become accustomed to the food of the aviary, if kept for a few days on ants' eggs and meal worms.

Breeding.—It builds its nest, which is like that of the Ox-eye, in hollow trees, between stones, or in the deserted habitations of other and larger birds. The female lays from six to ten snowy white eggs, marked with numerous indistinct blood-coloured spots. The young birds, if taken from the nest, may be reared on chopped meal worms and ants' eggs; but the best plan is to take the old ones with their brood, which, if supplied with ants' eggs, they will continue to feed and tend.

Mode of Taking.—The Crested Tit may be taken in the same manner as the Ox-eye.

Attractive Qualities.—This is a pretty bird, but its song is weak, and presents nothing worthy of notice. Its call is *Goerrkee!*

ADDITIONAL.—But few specimens of this bird have been obtained in Great Britain, and these only in the northern parts. COL. MONTAGUE, in his *Ornithological Dictionary*, says: "It is not uncommon in the large tracts of pines in the north of Scotland, particularly in the forest of Glenmoor, the property of the Duke of Gordon." SIR WILLIAM JARDINE, in a note to SELBY's *British Ornithology*, states that it annually breeds in some plantations not far distant from Glasgow, and elsewhere states, that he had received the nest of this species taken from some hollow tree, and that the inside lining was composed of the scales and cast-off exuvia of snakes. JOHN WALCOT, Esq., in the second volume of his *Synopsis of British Birds*, and DR. LATHAM, in the second supplementary volume to his *General Synopsis*, also report that they have heard of the species being plentiful in some parts of Scotland. MACGILLIVRAY has never seen the bird alive, nor MUDIE, although the latter states that he has been much in these northern forests, which it is said to inhabit.

178. THE BEARDED TIT.

Parus Biarmicus, LIN. *Mesange Barbue ou Moustache*, BUF. *Die Bartmeise*, BECH.

Description.—This handsome bird, which is about the size of the Ox-eye, measures six inches and a half in length, and ten inches and a quarter from tip to tip of the expanded wings. The beak is four lines long, and somewhat curved at the point, in colour orange, and surrounded by black bristles. The forehead is yellow; the feet black, and one inch in height. The head is light grey; and beneath the eye is a conical tuft of black feathers, almost like a moustache, from which the bird derives its name. The nape of the neck and upper part of the back are orange; the throat is white; the breast flesh-colour; the belly, sides, and thighs, like the back, but of a somewhat lighter shade; the vent black. The tail is three inches and three quarters in length, wedge-shaped, and orange. The outer feather is darker at the root, and almost white at the point, and the third is also tipped with white.

The female may be distinguished from the male by the absence of the moustache. The top of the head is rusty red, spotted with black; and the vent feathers are of the same colour as the breast and belly.

Habitat.—The Bearded Tit is a native of Germany, and is found in the neighbourhood of lakes and marshes, or, indeed, wherever there is an abundance of reeds and rushes. It is rarely seen in summer, at which season it retreats, in pairs, into the depths of the morasses; but in winter it assembles in small flocks, which scour the open country in search of food. In confinement, it may be allowed either to range the room, or may be kept in a large cage.

Food.—It eats various kinds of insects, especially the aquatic species, and the seeds of the common rush (*Arundo Phragmites*, LIN.) When first caught, it should be fed on poppy-seed, ants' eggs, and meal worms; but is afterwards content with crushed hemp seed, and the usual food of the aviary.

Breeding.—On this head we have but little information to offer. The nest of the Bearded Tit is fixed among the reed-stalks; is purse-shaped, and composed of grass-stalks and vegetable wool. The eggs, which are pale red, with spots of

various colours, are four or five in number. The young birds should be taken out of the nest when nearly fledged, and reared on ants' eggs and chopped meal worms.

Mode of Taking.—This is not an easy bird to catch; though fishermen and fowlers sometimes observe the spots which it frequents, and set limed twigs for it.

Attractive Qualities.—These are chiefly its beauty, elegance of form, and lively disposition. Some of the notes in the song of the male deserve to be compared with those of the Tom Tit.

ADDITIONAL.—This bird has been separated from the genus *Parus* by Dr. LEACH, in his *Systematic Catalogue*, and distinguished by the generic title *Calamophilus*, in reference to its partiality for those marshy and fenny districts in which reeds grow most luxuriantly. It does not appear to have ever been a very rare bird in this country, yet from the soft and almost inaccessible nature of the places which it mostly frequents, but little comparatively was known of its habits, until recent contributions to the various periodicals devoted to natural history, served to place them in a clearer light. A writer in *Loudon's Magazine*, a few years since, stated "that after a close search, he had discovered a flock of eight or ten of these beautiful little creatures on the wing, in a large piece of reeds, below Barking Creek, in Essex. They were just topping the reeds in their flight, and uttering in full chorus their sweetly musical note; it may be compared to the music of very small cymbals, is clear and ringing, though soft, and corresponds well with the delicacy and beauty of the form and colour of the birds. Several flocks were seen during the morning. Their flight was short and low, only sufficient to clear the reeds, on the seedy tops of which they alight to feed, hanging, like most of their tribe, with the head or back downwards. If disturbed, they immediately descend by running, or rather by dropping. The movement is rapid along the stalk to the bottom, where they creep and flit, perfectly concealed from view by the closeness of the covert, and the resembling tints of their plumage."

MACGILLIVRAY calls this bird the Bearded Pinnoch; he says it is also known as the Least Butcher Bird; according to MUDIE, it ought to be called the Bearded Reed Bird.

179. THE LONG-TAILED TIT.

Parus Candatus, LIN.

In the same genus with the preceding species, Dr. LEACH

places the Long-tailed Tit, of which bird BECHSTEIN makes no mention. As, however, it is with us a common species, and as capable of domestication as either of the other Tits, and, moreover, an extremely beautiful and interesting bird; we think it ought to be included here. MACGILLIVRAY makes it the only British type of a separate genus, which he calls *Mecistura*, or Mufflin, and gives the following distinctive marks—"Tail very long, plumage extremely soft and tufty; head, throat, and breast white; a broad band over the eye; the nape and the back, black; scapulars reddish, tail black, the three lateral feathers on each side externally white. Young, duller, without red on the scapulars.

"This singular-looking bird, the most diminutive of our British species, except the Kinglets, is generally distributed in the wooded and cultivated districts. Its habits are similar to those of the Tits, with which it occasionally associates; but it differs from them in attaching to the branches its nest, which is of an oblong form, composed of moss and lichens, lined with feathers, and having a small aperture near the top. The eggs are numerous, from six to seven twelfths long, and about five twelfths in breadth; white, generally marked with numerous faint red dots at the larger end. I have seen a nest, in which were sixteen young ones."

The Long-tailed Mufflin is the name by which this author distinguishes the bird; it has also several popular local titles, such as the Long-tailed Mag, Huck-muck, Poke-pudding, Mum-ruffin, Bottle Tom, Bottle Tit, the two last having reference to the shape of its nest, which is indeed a curious and elaborate structure, bearing some rude resemblance to a bottle in shape. RENNIE calls it "the most artfully constructed nest of any of our British birds," and quotes the descriptions given of it by DERHAM and ALDROVANDI, which in the main appear to be correct.

According to NEVILLE WOOD, this species, unlike most of the other British Tits, is entirely insectivorous, being never observed to feed on carrion of any kind. It seeks its insect prey among the branches and foliage of trees, with the same assiduity as its congeners, hanging on the under sides of the twigs, and frequently running up and down on the branches in the same manner as the Gold-Crested Kinglet. Sometimes

it associates with the Blue and Coal Tits, but is more commonly observed in flocks of twelve or fourteen, probably constituting the family party. Its flight, though never continued for any length of time, is straight and rapid.

Dr. LIVERPOOL reports that he has often endeavoured to preserve this bird in confinement, but without success. A pair of old birds which he once caught in a trap-cage, were extremely shy and obstreperous, and would eat nothing but insects; and as sufficient of this kind of food could not be procured for them, they soon died. He had no better success with individuals taken from the nest.

VII. DOVES.*

THE beak in this species is thin and straight, with the exception of a slight curvature at the point; covered with a membrane, and somewhat swollen at the base. The shanks are short, and the toes divided to their origin. Doves subsist chiefly on grain and seeds; though some of the wild varieties eat bilberries also. They produce only two young ones in every brood, which they feed with seeds softened in their own crop. They were formerly classed either with passerine birds or poultry; but they have so many distinguishing characteristics, as to make it advisable to range them in a separate order. All the species which I shall mention are indigenous, and may be tamed at any age.

ADDITIONAL.—According to the Quinary system, the Doves form the first family group of Order III. *Rasores*, or Scratchers. CUVIER places them among the Gallinaceous tribes, to which they certainly belong; TEMMINCK makes them compose his ninth order, *Columbæ*; and MACGILLIVRAY his eleventh order, to which he gives the distinctive title of *Gemitrices*, or Cooers. "These being," he says, "the only single family of *Columbinæ* in this order, the characters of the family and order are the same. The variations in the form of the wings and tail, as well as other circumstances, give rise to a number of generic distinctions. The

* *Tauben*, BECH. *Columbæ*.

four species which occur in Britain belong to the genus *Columba*. A solitary individual of an American species has also been introduced, belonging to the genus *Ectopistes*."

This is the Long-tailed Passenger Pigeon (*Ectopistes Migratoria*), of which the only specimen obtained in this country was described by Dr. FLEMING in his *History of British Animals*. Of the Columbine birds MUDIE observes, "that they have in all ages claimed much of the attention of mankind; and the poets have chosen them as the type of all that is gentle, amiable, and affectionate. The mournful sound of their voices, the attachment of the pair to each other, and to their young; the form, gloss, and colour of the birds, and the evolutions which they perform on the wing, all give them an interest to the lover of nature; while the rapid rate at which they breed, and the flavour of their flesh, have made them of consideration in an economical point of view. They are, however, very voracious feeders, and while the ripe grain and pulse are in the ground, probably destroy more than they are worth; but at other seasons they are not without their uses."

"The characteristics of the order are: the bill of moderate length, covered at the base with a membrane, in which the nostrils are pierced, and the upper mandible curved at the point; the tail containing twelve feathers, and the feet having three toes before and one behind, free their whole length, and all articulated to the extremity of the tarsus, so that they are equally adapted for walking on the ground, for perching, or supporting the bird on tufts of vegetation, of which it eats the seed."

180. THE STOCK DOVE.

Columba ænas, LIN. *Le Biset*, BUR. *Die Holztaube*, BECH.

Description.—The Stock Dove is thirteen inches in length, and about the size of the common Pigeon. The beak, which is somewhat curved at the point, is whitish, except in summer, when it changes to a pale red; that portion of it, however, round the nostrils is orange. The iris is brown: the feet blood red. The head, as far as the middle of the neck, is bluish grey: the middle and lower part of the neck dove colour: the breast is reddish grey, with a bright purple gloss upon it: the rest of the under part of the body light grey. The upper part of the back, with the wing coverts and scapulars, are grey, the latter being also tinged with red: the middle of

the back, rump, and larger wing coverts light grey. The pen feathers blackish, some having also a border of light grey. The centre pen feathers are tipped with black, and the larger wing coverts are spotted with black on the middle of the outer plume, which produces two large black spots on the wings. The half of the tail nearest the root is a beautiful grey; but becomes gradually darker, so that the tip is quite black.

In the female, the green colour on the neck and the purple of the breast are not so distinct: and the general hue of the plumage is more of a dingy bluish grey than in the male.

Were it not for our accurate knowledge of the Wild Pigeon (*Columba domestica fera*), one might suppose the Stock Dove to be the original parent of the numerous varieties of Tame Pigeons: as it bears a considerable resemblance to them in colour and size; chooses similar situations for its nest; often accompanies them to the dovecot, where it remains with them throughout the winter; and pairs with them either in the farm yard or aviary.

Habitat.—The Stock Dove frequents mountainous districts, if well covered with trees, and seems to prefer the bases rather than the summits of a mountain chain, as being less remote from the open country where it seeks its food. It is generally found in woods, in which coniferous are mixed with other trees. It is a sociable bird, departing in large flocks about October, and returning in the beginning of March, or, if the season be mild, as early as the end of February.

In country places the Stock Dove is often made an inmate of the house: and if taken young, or reared from eggs which have been hatched by the domestic Pigeon, may be kept in the dovecot. In winter, however, it requires considerable warmth.

Food.—The food of the Stock Dove, like that of the domestic Pigeon, consists of various kinds of grain, as well as peas, lentils, vetches, linseed, pine and fir seeds, &c. It is especially fond of hemp seed. It rarely lives more than five or six years in confinement.

Breeding.—The Stock Dove builds its nest in hollow trees, or crevices of rocks, and produces two broods in a year. The eggs are white, and are hatched without difficulty by the

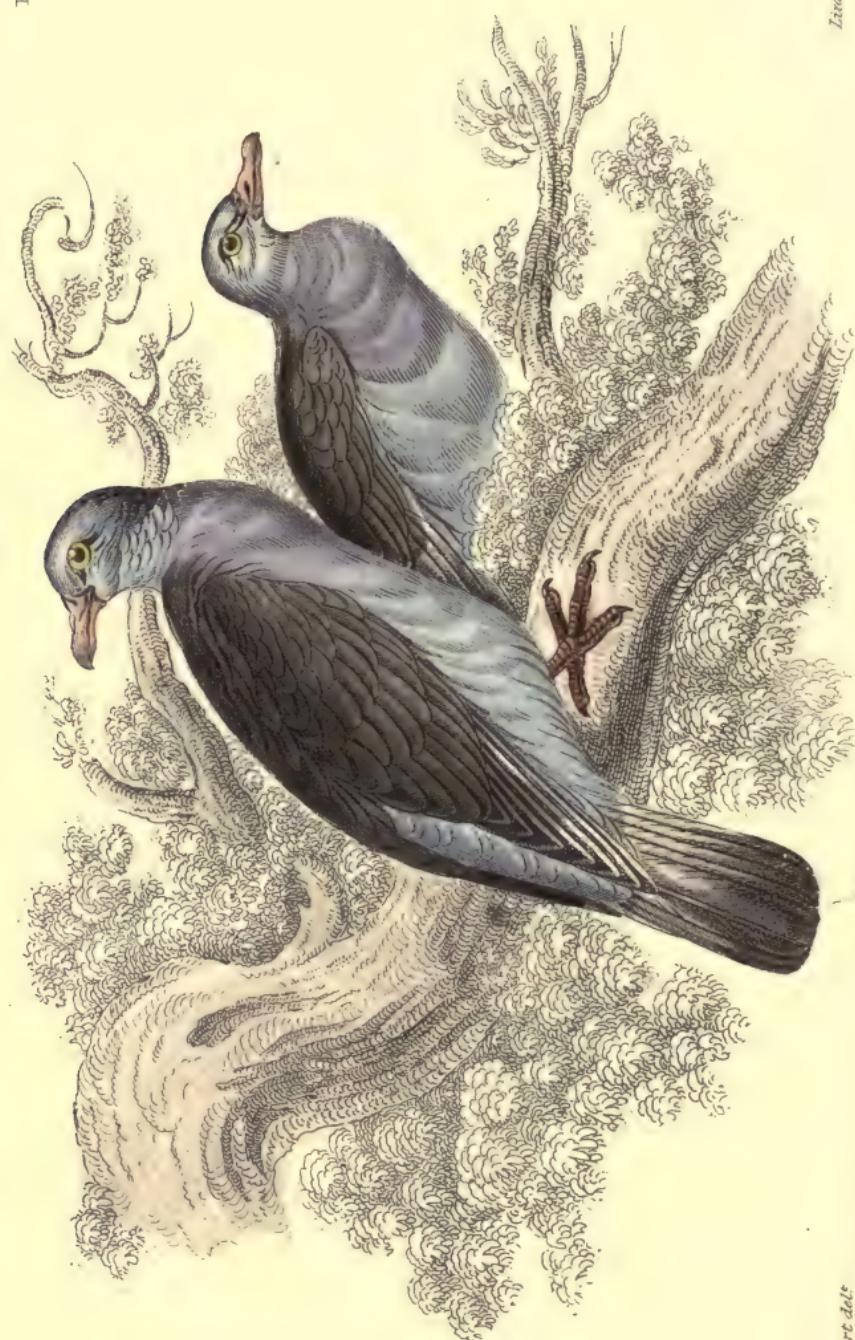
domestic Pigeon. If the young ones, thus reared, be prevented from migrating in the autumn, they will pair in the spring with the Pigeons, and produce very handsome mules. Of these bastard broods, however, it is very rare that both birds are reared.

Mode of Taking.—This, like the two following species, may be easily taken at the salt-licks provided for the deer, by means of a clap net, which the fowler must be ready to throw over them when they perch. Between twelve and one o'clock, and occasionally after sunset, they may be taken in the water trap; but are very cautious in their approach to it.

Attractive Qualities.—The beauty, affectionate disposition, and agreeable cooing notes of this bird, are sufficient to give it a place in any aviary.

ADDITIONAL.—MACGILLIVRAY terms this the Blue-backed Dove, and says that the above name was given to it at a time when it was believed to be the origin of the domestic races, and identical with the Rock Dove, which will presently be described, and to which in form, size, and general appearance, it is very similar. TEMMINCK, it seems, was the first naturalist who clearly distinguished and separated the two species. The one which we have now to notice is sometimes called the Wood Dove. MUDIE observes, that "this is a smaller species than the Ring Dove, and in England it is rare, excepting in the midland counties. The southern parts of Europe are its principal haunts; but it is a roaming bird, and migrates in large flocks. It is a percher, and always nestles in holes of trees, or in tall bushes, which might have convinced authors that it could not well be the parent *stock* of those numerous varieties which live in Pigeon holes, and never perch or build in trees, though the Pigeon houses are in the middle of woods. If the domestic Pigeon had been derived from the Stock Dove, (or the 'Bush Dove,' as it is sometimes called with more propriety), we should certainly have found it resting upon, or moaning its note from the trees of the garden, rather than the roof of the house. The only note of the Stock Dove is a hollow grunt. The same pair builds for years in the same place. This bird has no white on the rump, no bars on the wings; it is thicker at the shoulders and on the breast than the domestic Pigeon. The legs and feet are not so strong, the former are not so much feathered, and the claws are not so well armed on their under-sides with pads and tubercles."

YARRELL observes, that "the Stock Dove is perfectly distinct from the Rock Dove, as its localities, habits, voice, and plumage will sufficiently demonstrate. It was called *aenus* by RAY, on



WOOD PIGEON

account of the vinous claret colour of the plumage of the neck ; and Stock Dove, not because it was by some considered to be the origin of our domestic stock, but because it builds on the stocks of trees, particularly such as have been headed down, and have become in consequence rugged and bushy at the top. In the open counties of Suffolk and Norfolk, this species frequently makes its nest in holes in the ground, generally selecting a rabbit's burrow for the purpose." MR. JENYNS says "the Stock Dove inhabits woods with the Ring Dove, but is less plentiful and more local ; not uncommon in some of the midland and eastern counties, where it remains the whole year. Builds in the hollow of pollard trees, and lays two eggs ; does not coo like the Ring Dove, but utters a hollow rumbling note, heard at intervals throughout the spring and summer months ; flocks with the Ring Dove in winter, and supports itself in the same manner."

181. THE RING DOVE.

Columba Palumbus, LIN. *Le Ramier*, BUF. *Die Ringeltaube*, BECH.

Description.—This bird, which is seventeen inches and a half in length, and the largest of our European Wild Pigeons, is supposed by some naturalists to be the original of our large domestic Pigeons. It is, however, not so easy to tame as the Stock Dove : seems not to like the company of House Pigeons, and will not build, like them, in holes provided for the purpose, but prefers to choose its own position for a nest.

The beak is reddish white ; the iris whitish yellow ; the feet reddish. The head and the throat are dark ashen grey ; the front of the neck and the breast grey, inclining to purple ; the side and back of the neck beautifully iridescent. A large crescent-shaped white spot adorns the side of the neck near the base, but does not quite surround it. The belly, vent, and thighs, are whitish grey ; the plumage of the side light ashen grey ; the top of the back, shoulders, and small wing coverts greyish brown ; the rump ashen grey. The coverts of the first row of pen feathers are black ; the first great wing coverts white, which occasions a white spot on the wings. The remaining coverts are ashen grey ; the tail feathers grey, gradually inclining to black towards the end.

Habitat.—This Pigeon inhabits the temperate zone of Europe and Asia, and is therefore common in the woods of Germany. It is a bird of passage, departing in small flocks in the beginning of October, and returning in or after the middle of March, but

always some weeks before the Stock Dove. In harvest time it may be noticed in groves near the corn fields.

Food.—It feeds on all sorts of corn, as well as leguminous seeds, and bilberries. When confined, it must be fed at first on wheat, afterwards on all sorts of grain, except oats. It is, however, impossible to preserve it long.

Breeding.—The nest is built in high trees, and made of dried branches in so clumsy a manner, as to be often blown down by the wind. The female has two broods a year, and lays each time two large white eggs. If the eggs be put under a domestic Pigeon, they will be hatched, and the young birds, if kept in a room at the season of migration, and during severe winters, will be accustomed to the dovecot. The Ring Dove sometimes pairs with the domestic Pigeon, but I have never observed any result. Perhaps further experiments might succeed in producing a hybrid.

Mode of Taking.—The Ring Dove may be caught like the Stock Dove. Old birds when taken, learn to eat with great difficulty; and most of them would die of hunger, if not crammed.

Attractive Qualities.—This is a handsome bird; and the sonorous coo of the male is very agreeable. The accompanying movements also are very amusing: he hops now forwards now backwards, now sideways; and turns his head in every direction. The Ring Dove becomes exceedingly tame.

ADDITIONAL.—The Ringed Dove, Wood Pigeon, or Cushat, are the names commonly applied to this bird, the largest known to us of the Dove species, and by some naturalists considered as the origin of the several beautiful varieties that inhabit the Dovecot and the Pigeon-house; the difficulty of taming and inducing it to live in a domestic state would seem to militate against such an opinion. “It is,” says, MACGILLIVRAY, “a strong bird of its size, having its body large and full, the neck rather short, the feet short and strong, the wings and tail rather long.” According to the same author, “the species is generally distributed, being found in all the more or less wooded districts of England and Scotland; but prefers cultivated tracts, avoiding those which are bare and rocky; and as it does not repose at night on rocks, it is not met with in the unwooded isles of the North. In winter it appears in large flocks, sometimes amounting to many hundreds, when the individuals of a district congregate in some favourable locality, although in ordinary circumstances it is not so decidedly

gregarious as the Rock Dove. It has a strong and rapid flight, performed by quick beats of the half-extended wing, with occasional intermissions, its pinions sounding as it glides along ; and when on an excursion to a distant part, it flies high above the trees, whereas the species just mentioned generally proceeds at a small elevation. When it has espied a place likely to afford a supply of food, it alights abruptly, and usually stands for a short time to look about, after which it commences its search. On the ground its position is a little declined, the tail nearly touching the surface ; and, when feeding, owing to the shortness of its legs, its breast is but slightly elevated. It walks in the manner of the Domestic Pigeon, that is with short and quick steps, moving its head gently backwards and forwards. The flock disperses and spreads over the fields, it being seldom that two or three individuals keep close together, and they generally take care not to approach the enclosing walls or hedges, so that it is difficult to shoot them on the ground. In the time of snow or hard frost, they frequent turnip fields, and are more easily approached ; but in general they are very suspicious and vigilant, ever ready to fly off on the slightest appearance of danger. Even by clear moonlight, when I have tried to shoot them on the roost, they perceive their enemy before he can discover them. Frequently, however, in the woods, more especially in the breeding season, one may surprise them within shooting distance ; and, by waiting for their arrival at their roosting places in winter, considerable execution may occasionally be done among them. As the flesh of this Pigeon affords a sufficiently palatable article of food, it is abundant in our markets in winter and spring."

182. THE TURTLE DOVE.

Columba Turtur, LIN. *La Tourterelle*, BUF. *Die Turteltaube*, BECH.

Description.—This handsome bird is about the size of a Missel Thrush, and ten to eleven inches in length. The beak is slender and light blue ; the iris orange ; and a narrow bare ring round the eyes flesh-coloured. The feet are purple ; the forehead whitish ; the top of the head and upper part of the neck light blue ; a colour which extends down the back, becoming darker and more dingy near the tail. There is a black spot on each side of the neck, together with three or four crescent-shaped transverse white stripes. The throat, belly, and vent are white ; the neck and breast a light reddish violet. The uppermost small wing coverts are light grey ; the rest blackish, with a broad border of rust colour. The foremost pen feathers are blackish ; the hindmost ashen grey, edged

with rose colour, which gives a very handsome appearance to the wings. The tail feathers are blackish ; the centre feathers wholly so ; the rest tipped with white.

In the female the breast is paler ; the wings are spotted with rust colour ; and the spots on the neck are not so large.

Habitat.—In a wild state these birds are found throughout the temperate zone of Europe and Asia, and in some of the South Sea Islands. They frequent woody and mountainous districts, but do not penetrate far into the great mountain ranges, and are sometimes met with in gardens and detached groves. They are the least hardy of our wild Pigeons ; and though returning from their migration at the end of April and beginning of May, depart again in September. In seasons when fir cones are unusually abundant, as, for instance, 1788, they have been seen in vast numbers in the Thuringian Forest. They are by no means shy.

In confinement they may either be allowed to range the aviary or may be kept in a space near the oven, divided from the rest of the room by a grating. Young birds, which have been reared by domestic Pigeons, may safely be kept in the dovecot ; which, however, should always be in such a position as to admit of the application, in winter, of artificial heat. They are occasionally confined in garden aviaries, in which they will not only breed among themselves, but will produce Mules with the Collared Turtle.

Food.—The seeds of coniferous trees form the chief food of the Turtle Dove ; though it also eats vetches, peas, linseed, millet, hemp and rape seed, rye, wheat, buckwheat, barley, and bilberries.

In the aviary it is content with bread, and is very easily preserved.

Breeding.—The nest is made of a few dry twigs laid together ; and though tolerably secure when built in a pine tree, is often blown out of beech and other trees. The female lays two white eggs.

The Turtle Dove, whether reared from the nest or caught when not very old, will breed in confinement, and make a nest in a small straw basket fixed in the corner of the cage or grating. The eggs are generally without hard shells ; and it is, therefore, easier to rear Mules between this and the Collared Turtle, in which case the eggs are fully provided with shells.

The young Turtle Doves are grey on the upper part of the body, and are spotted with blackish blue on the wings. The Mules between the Turtle and the Collared Turtle are variously marked, according to the degree in which they partake of the characteristics of each parent. They are generally reddish grey on the head, neck, and breast; and of similar colour on the back and wing coverts, which are, however, covered with indistinct dark spots. The belly, the hindmost pen feathers, and the tip of the tail feathers are white; the larger pen feathers a greyish brown. These Mules are fruitful; and a peculiarity, which I have also noticed in Mules between other species, is that they are larger than their parents, and have a peculiar cry. Their cooing is louder, though not so pleasant; and, while uttering it, they make a deep inclination of the body, like the Collared Turtle.

Mode of Taking.—The Turtle Dove may be caught in the same manner as the foregoing species.

Attractive Qualities.—This is a favourite Cage-bird in country places, not only on account of its tameness, beauty, and affectionate disposition, but because it is supposed to attract to itself the diseases of its owner. It is certainly true that if sickness prevail in the house, the Doves appear to suffer with the rest. The cooing of the male, also, is very peculiar, consisting of a deep humming tone; after uttering which it drops its head, and remains quiet. It often lives eight or nine years in confinement.

ADDITIONAL.—The Turtle, or Ring-necked Turtle, as it is sometimes called, is with us a summer visitant only, and confines itself pretty much to the southern and south-eastern counties. MACGILLIVRAY is not aware that it has ever occurred in Scotland. MONTAGUE states that it is found, though rarely, as far west as Devonshire; and, according to BEWICK and SELBY, some individuals have been seen in Northumberland in autumn. It is in the woods of Kent from whence they sally forth to commit their depredations upon the neighbouring pea-fields, that these beautiful birds may be most frequently seen. They usually fly in small flocks, and nestle on the thickest trees, emitting a peculiarly plaintive cry. By the end of September they are generally all away to a warmer climate; their shallow nests are deserted, and their soft *Coo-o-o-o* is heard no more in the autumnal woodlands. “Doves,” says GILBERT WHITE, “coo in an amorous and mournful manner, and are emblems of despairing lovers.” And of all

the cooers not one we think has a note so tender and mournful as this: hence, perhaps, it is that the poets have agreed to make the Turtle the emblem of constancy and devotion to its mate.

183. THE COLLARED TURTLE.

Columba Risoria, LIN. *Tourterelle à Collier*, BUF. *Die Lachtaube*, BECH.

Description.—This bird is one foot in length, and somewhat larger than the common Turtle Dove. The beak is slender and blackish, except near the root, where it is reddish white; the iris is golden yellow; the feet blood red. The upper part of the body is reddish white; the under part white; and the back of the neck is marked by a black spot, in the shape of a crescent, the points of which are turned to the front, and which is edged at the back by a narrow stripe of white. The shafts of the foremost pen feathers and tail feathers are blackish; and the under side of the tail is variegated with black and white.

The female is somewhat smaller and lighter in colour than the male.

Habitat.—The Collared Turtle is a native of India and China, from which countries it has been brought to Europe, where it is now domesticated; and may often be seen in cottages, the simple inhabitants of which imagine that it attracts their diseases to itself. It may either be kept in a large cage, or a warm grated corner, or allowed the entire range of the room. In the latter case its wings must be cut, or tied, lest it should break the windows, or do any other damage. The experiment of keeping the Collared Turtle in ordinary dovecots has been tried with success; but the application of artificial heat is necessary to preserve it alive during the winter.

Food.—The favourite food of this bird is wheat, and the peasants often give it the siftings of their corn. It will also eat bread, millet, poppy, rape, and linseed.

Breeding.—The Collared Turtle readily breeds in confinement, and will construct its rude nest with a few straws and grass stalks, if provided with a basket for the purpose. The female lays two beautiful white eggs, on which she sits for sixteen days. She rarely, however, succeeds in rearing both young ones; as an egg either proves addled or the nestling is suffered to die of hunger; and it is, therefore, a rare occurrence if more than six young birds are preserved from one pair in a year. The nestlings exactly resemble their parents, and



E. Lear del.

TURTUR RISORIUS.

(Collared Turtle.)

Native of Egypt &c.

Lixars sc.

the presence or absence of the reddish hue is a sure criterion by which to distinguish the sex.

Diseases.—Besides decline, which may be treated in the manner mentioned in the Introductior, the Turtle Dove seems liable to all the diseases which attack the persons with whom they live. In this manner it catches the small-pox, swollen feet, &c. The young birds, before they are able to feed themselves, often suffer from ulcers in the crop, which exude a foetid, cheesy matter. This disease is almost always fatal; but it may be prevented by supplying the old birds with abundance of fresh water, and a change of food. Owing to the many diseases to which this bird is liable, it rarely lives more than eight years.

Attractive Qualities.—The Collared Turtle is a very clean bird, and its cooing, *hihihihihrih!* resembles the sound of human laughter. The male is very fond of his mate; perches near her during the night, and appears to delight her with his cooing. When he invites her to the nest, he utters another note, which rather resembles a howl, but does not turn himself round, like the Domestic Pigeon. He hops towards her, then stands still, lowers his head to the ground, dilates his crop, and cries, *Kukruh!*

184. THE WILD ROCK PIGEON.

Columba Domestica, LIN. *Biset, ou Pigeon de Roche*, BUF. *Die Haustäube*, BECH.

Description.—As the Domestic Pigeon, of which this species is the original stock, is, correctly speaking, an inhabitant of the farm-yard, I might with propriety pass it by without mention. Nevertheless, as there are varieties, which the bird-fancier might not think unworthy of a place in the aviary, I subjoin a few particulars. The Wild Rock Pigeon is the parent stock of the numerous varieties of Domestic Pigeons. In Germany, it may be noticed in open dove-cots in the farm-yards, in churches, towers, old buildings, &c.; while in England, Italy, and Russia, it is found wild in great numbers in holes of the rocks at the sea side. It is bare-headed, and the hue of its plumage is dark grey, or lead-colour, with a purple gloss on the head and breast. The lower part of the back is white; two blackish blue stripes cross each other on the wings; the pen feathers are blackish blue; the tail grey, tipped with

blackish blue, and having the outermost feathers edged with white.

The most remarkable varieties of this species are the following :—

1. *The Monk* is a Crested Pigeon. The head and crest are white; the rest of the body yellow, red, blue, or black.

2. *The Shield Pigeon* is only occasionally crested. The plumage is white, with exception of the scapulars, wing coverts, and hinder pen feathers, which are yellow, red, blue, black, or silvery grey.

3. *The Swallow Pigeon* is pure white, except the wings and a round spot on the top of the head, which are yellow, red, blue, black, or silvery grey. It sometimes has a crest.

4. *The Striped Monk* is black, with a white poll, and white stripes across the wings.

5. *The White Head* is like No. 1 in every respect, except in having a white tail.

6. *The Marked Pigeon* is white, with the exception of a small streak on the forehead, and another on the tail, which are dark red, or almost black.

7. *The Starling-necked Pigeon* is blackish blue, with white stripes across the wings, and a narrow white streak on the breast.

8. *The Pouter* is a Crested Pigeon. The plumage is white, with exception of the poll, top of the neck, and breast, which are marked with brown, black, or yellow. Another variety has a coloured tail.

9. *The Veiled Dove* is white, with exception of the head, neck, and foremost pen feathers, which are black, red, or yellow.

10. *The Striped Starling-necked White Head* is the handsomest of all. It is black, with a white poll and tail, and white stripes on the wings and breast.

There are, besides these, many other varieties of the Domestic Pigeon; which, however, are said by naturalists not to be originally derived from the Wild Rock Pigeon, but to be themselves indigenous in different parts of the world. Among these are :—

1. *The Trumpeter Pigeon*, so called from its peculiar cooing, is crested, and generally has its feet covered with feathers. It is met with in all colours, but is often mottled with black and white. It is a good breeder.

2. *The Tumbler*, which derives its name from the fact that it overbalances itself in its flight, is almost as large as the Stock Dove. Its beak is short, and the naked circle of the eye is red.

3. *The Jacobine Pigeon* is a small bird, with a short beak, and having at the top of the neck a collar or stripe of long feathers. In colour it resembles the Shield Pigeon.

4. *The Peacock* or *Fan-Tailed Pigeon* is like No. 3 in colour, but has the power of spreading out its tail like a Peacock.

5. *The Perriwigged Pigeon* resembles the Veiled Pigeon in colour, but has a high forehead, a short beak, and a crest, which passes down the sides of the neck and breast like a wig.

6. *The Pouter* is a large Pigeon, of various colours. It has a high forehead, a short beak, and possesses the power of inflating the crop to a very large size.

7. *The Turkish Pigeon* is a large bird, of various colours, which has the membrane of the beak, as well as the circle of the eyes, very thick and wrinkled.

Mode of Treatment.—If it be desired to keep any of these varieties in the aviary, a corner should be separated from the rest of the room by a grating; and provided with wicker baskets, and a plentiful supply of straw, for building nests. The birds eat wheat, barley, vetches, and peas; and require a plentiful supply of water, both for bathing and drinking. If they be also supplied with gravelly sand, it will be found to assist their digestion.

Attractive Qualities.—These are chiefly their beauty, and affectionate disposition. The Trumpeter Pigeon is also prized on account of its peculiar cooing.

ADDITIONAL.—This bird is the *Columbae Livia*, SELBY, JENYNS, GOULD, MACGILLIVRAY. The last named calls it the White-backed, or Rock Dove; he states that it is also known as the Wild Pigeon, or Dove, and the Rock Pigeon, or Dove, the latter being a Scottish name, and speaks of it as the undoubted original of our domestic varieties; most British naturalists agree with him in this particular. The main characteristics of the bird are thus shortly given in the above-named author's *Manual of British Birds*; to his more copious *History*, we refer our readers for full particulars:—‘Plumage of the male light greyish blue; the neck splendid with green and purplish red; the middle of the back and lower wing coverts white; two black bands on the

wings, one on the six inner secondary quills, the other on the secondary coverts; bill brownish black. Female similar, but with the green and purple of the neck less extended.

"Occurs abundantly in the Hebrides, Shetland, and Orkney Islands, and along the rocky shores of the northern parts of Scotland; less plentifully here and there, on the coasts of other parts of Britain, as well as in Ireland. It resides in caves and crevices of rocks; feeds in the pastures and fields on seeds of various kinds; has a very rapid flight, walks gracefully and with celerity; is gregarious in winter and spring, and breeds several times each year. The male struts and cooes like the Domestic Pigeon. The nest, rudely composed of small twigs, grass, and other materials, is placed on a sheltered part of the rocks. The eggs, always two, elliptical, pure white, glossy, measure an inch and seven-twelfths in length, an inch and two-twelfths in breadth. Young birds, taken from the nest, are easily reared, and become domestic; tame Pigeons sometimes associate with the wild individuals; and becoming wild, and resorting to the rocks or to old buildings, gradually assume the appearance of the Wild Rock Doves. The flesh of this bird is superior to that of the Wood Pigeon, but generally more tough."

"The Rock Dove," says YARRELL, "as a species distinct from the Stock Dove, was called *Columba Livia*, on account of its lighter or more livid blue colour; the pure white on the lower part of the back; the two conspicuous black bars across the wings; the voice, in conjunction with its habits, so opposite to those of the Stock Dove, are sufficient proofs of distinction, and accordingly, the Rock Dove is not only admitted as a good species, but from several other circumstances, there appears no reason to doubt that the Rock Dove is also the species from which our Domestic Pigeons were originally derived."

The same author informs us that this bird has a very extensive geographical range, being found as far north as the Faroe Islands, and southward at Teneriffe, Madeira, over North America, inhabiting some of the rocky islands in the Mediterranean, and eastward as far as Greece. PENNANT, in his *Arctic Zoology*, says that it goes as far east as Lake Bakal; and TEMMINCK mentions, that skins received from Japan do not differ in any respect from those of Europe and of Africa.

The whole length of this bird is about eleven inches and a half. From the carpal joint to the end of the wing eight inches; the first quill feathers considerably longer than the fourth, but a little shorter than the second and the third, which are nearly equal in length, and the longest in the wing.

Of the Domestic Pigeons, in their several varieties, much might

PLATE 37.



(The Common Partridge.)
PERDIX CINEREA.

be said here. Of Pouters, Tumblers, Jacobins, Mandarins, and Shakers, a volume might be written, and a very interesting one too. Of the power of vision, as well as speed and duration of flight, of the Carrier Pigeon, the most useful of the tribe, numberless instances are on record, which, were they not well authenticated, we might well be excused for disbelieving. The extraordinary changes of plumage, and modifications of form, even, which have been produced in these birds, are equally curious and interesting. But on these it does not accord with the plan of our present volume to dwell; nor to enlarge upon the poetical associations connected with this family of birds.

VIII. POULTRY.

THESE birds may be known by the following characteristics: the beak is raised; the upper mandible is arched, so that its edge projects beyond the under one. The nostrils are covered with a raised cartilaginous membrane; there are more than twelve feathers in the tail; the feet are divided, and yet connected at the first joint. They chiefly feed on seeds, which they soften in their crops. I know of only six kinds, which can be tamed in the house.

ADDITIONAL.—In this country the term Poultry would be generally understood to mean all those domestic birds which are reared for the table; such as common Fowls, Turkeys, Geese, Ducks, Guinea Fowls, &c.; and the three species enumerated by BECHSTEIN, would scarcely be considered as appropriately classed under such a head; as, however, the limits of our work will render it impossible for us to enter fully into so wide a field as the varieties, mode of treatment, breeding, &c. of Poultry occupies, we must be content to give merely the text of the original for this and the two following sections, both of which might also be greatly extended; indeed, the subjects of Poultry, Game, Wading and Aquatic birds, might well furnish matter for a volume of themselves.

185. THE COMMON PARTRIDGE.

Tetrao Perdrix, LIN. *La Perdrix Grise*, BUF. *Das Gemeine Rebhuhn*, BECH.

Description.—This well-known bird, which is very fleshy, and has but few feathers, is twelve inches and a half long. Its short beak is bluish; the feet a somewhat brown flesh colour. Under its reddish brown eyes is a warty bare spot, of

a bright red colour; the body is a mixture of ashen grey, black, and yellowish red. The forehead, a stripe which passes above the eyes to the neck, and the throat, are a beautiful brownish red; the top of the neck and the breast ashen grey, finely marked with black; and underneath the breast is a chestnut-coloured speck, shaped like a horse shoe, which in the female is altogether wanting, or is not so large and distinct. The quill feathers are dark brown, with transverse rust coloured stripes; and the feathers of the tail reddish brown.

Habitat.—They inhabit the open country, and adjoining woods, all over Europe. In the open country, they betake themselves by night to the bushes. As they frequently die of cold, or of hunger, in a hard winter when the snow is deep, they are often caught in flat countries by a net, and then confined in a room, which should be either very high, or have a net stretched over the roof and windows, to prevent the frightened birds from injuring themselves.

Food.—In the room where they are at liberty to run about, they are fed with barley and wheat. They will also eat bread, the usual paste, cabbage and lettuce; and always need some green vegetable food, as, when wild, they are obliged to feed the whole winter through, on the tops of grass, and young budding plants. In summer, however, they eat clover, and various kinds of seeds. They are fond of rolling in wet sand, of which they ought to have a supply.

Breeding.—If domestic birds of this species are desired, they should be reared when young, as such become exceedingly tame, and are very pleasing in their habits. Before they are able to eat grain, they are fed on ants' eggs, and hens' eggs cut small, and mixed with lettuce, till they become gradually accustomed to harder food. They are easy to rear, as a brood often numbers twenty-one, which run about with the old ones, as soon as they are out of the shell, and fall in the way of mowers, shepherds, huntsmen, &c. It would not be difficult completely to transform partridges into domestic fowl, by putting the eggs under hens in some enclosed place, cutting the wings of the young birds, keeping them in summer in a walled garden, and supplying them well with food. If the attempt did not entirely succeed the first season, they would by this half training gradually become accustomed to their food, and the sight of man, and at last breed in the poultry yard.

186. THE QUAIL.

Tetrao Coturnix, LIN. *La Caille*, BUF. *Die Wachtel*, BECH.

Description. — This well-known bird is little more than seven inches in length. The beak is short; blackish brown in summer, greyish in winter, and resembling in form that of the Partridge; the iris is olive brown; the feet a whitish flesh colour. The upper part of the body is spotted with blackish brown and rust colour, with a few small white stripes; the throat blackish brown, and encircled by a double streak of chestnut brown. The lower part of the neck and the breast are pale rust colour, marked by indistinct longitudinal stripes; the belly dingy white; the shanks reddish grey; the pen feathers dark grey, crossed by narrow streaks of rust colour. The tail is dark brown, with transverse stripes of rust colour and white, and very short.

The female may be distinguished by the fact, that the throat is white, and the breast, like that of a Thrush, spotted with black.

Habitat. — The Quail, which is found throughout the eastern hemisphere, is a bird of passage; arriving in Germany in May, and departing about the end of September. It chiefly frequents the fields of grain; and especially those of autumn-sown wheat.

In confinement, it may either be allowed to range the room, where it is remarkable for cleanliness, and a gentle and engaging disposition, or it may be kept in a cage especially designed for it. This should be two feet in length, one foot in breadth, and one foot two inches in height, and may be made of any desired shape. There should be three openings in it; two for air and light, and the third for the drinking glass; the floor, which should be covered with sand, ought to be made to draw out, like the food trough; and the cage must be covered with green cloth, as the bird, which frequently springs upwards, might injure its head against a wooden roof. In such a cage as this, especially if hung near the window, the Quail will sing far better than if allowed to hop about the room, when its attention is diverted by a multiplicity of objects.

When a male, without a mate, is allowed the range of the aviary, it is advisable to confine him during the pairing season in June; as he will often pursue other birds with great ardour, especially those which have a grey plumage like his own. Larks

for instance, he follows with great violence, and often pulls out their feathers so much, as to leave them almost bare.

Food.—In a wild state, the Quail eats all kinds of seed and grain ; for example, wheat, millet, rape, hemp and poppy seeds. It feeds also on green plants and insects ; and is very fond of ants' eggs. In confinement it may be fed with wheat, millet, hemp and poppy seed, bread, barley meal and milk, or the universal paste : and in some cases has been preserved in health for a long time on chopped cabbage and lettuce. It requires a plentiful supply of wet sand, partly for rolling in, and partly to aid in the process of digestion. It will not roll itself in dry sand ; and is fond of drinking, though the water should not, as some assert, be muddy. The Quail moults twice a year, namely in spring and autumn, and requires at those seasons an abundance of good food, and a large supply of river sand.

Breeding.—The only nest formed by the Quail, is a hole scratched in the ground, and lined with a few straws or grass stalks. The female does not lay her eggs, which are ten to fourteen in number, and bluish white with large brown spots, till late in the year, often not till July ; the brood is hatched in three weeks, and the young birds run about with their mother before they are fledged ; though this takes place before the autumn migration. The males are exceedingly ardent ; and when one is suddenly brought into a room where there is a female, he immediately pursues her, and will almost strip her of her feathers if she do not at once yield to his desires. This heat is not so manifest if a pair be kept in a room together throughout the year. I know a bird-fancier who from two females and one male, annually rears a considerable number of young Quails. As soon as the male has paired with both females, and they begin to lay, he is shut up in a cage by himself ; the females hatch their eggs, and rear the young birds, which, if put under good instructions, often become excellent singers.

The young Quails, which have been bred in the fields, may either be committed to the care of a tame female, who will rear them as if they were her own, or may be fed with hard-boiled egg chopped small, millet, and wheat. It is the best plan, if possible, to take the mother with the brood, which may be frequently accomplished by a clap net. Before the first moult, the young males are scarcely distinguishable from the females ; though afterwards characterized by the brown throat.

Mode of Taking.—From the many methods of catching this bird which are in use, I shall select only the easiest and most usual. The males are generally decoyed into a net by means of a Quail call, which imitates the cry of the female at pairing time, *Peupeu, Peupeu*. This plan is very successful during the

spring in capturing those males which have been heard to utter a good note, which consists in repeating the syllables *Pikvervik!* from seven to a dozen times. If they have not been previously frightened by an unskilful fowler, these birds usually rush blindly into the net. The chief requisite for the sport is a good call, which is made of leather, with a pipe formed of the leg bone of a cat, hare, or Stork, and may be purchased for a trifle.

The mode of procedure is the following. As soon as the fowler hears the note of the bird which he wishes to possess, he advances to within fifty paces of the spot, sets his net in the corn, close and well fastened to the ground, and then retires to a little distance. When the Quail again calls, he answers two or three times, taking care to answer the bird immediately as the females do, and not to call too often or make false notes; for if the male suspects any deceit, he will at once become silent, and probably be very cautious throughout the season. If all go well, however, the Quail rushes direct to the spot where he hears the call, and is caught in the intervening net. His course is indeed so straight, that if he should creep under the net, he will come near enough to the fowler to be taken with the hand. Should the Quail, however, miss the net, the best plan is to proceed to the other side and call again; when the second attempt will probably be successful. Some birds, if the net be too loose and therefore visible, will make a circuit round it, and it is therefore advisable to make a loose corner at each end, in which the Quail will entangle itself. This method only succeeds in dry weather. When it rains, or the dew is on the ground, the Quails fly to the cali. On a favourable day in the pairing season, three or four birds may often be caught in the same field.

If no male be heard in the field, the bird-catcher takes a call about twice the size of the one above mentioned, and consequently audible to a greater distance. By imitating the cry of the female on this instrument he will at once discover if there be any males in the neighbourhood, and is enabled to set his net as before described.

If the object be to catch females as well as males, the sport is most successful in autumn, when the corn is only partially cut, and the patches still left standing harbour numbers of these birds. Six or eight nets are necessary for the purpose, which are to be set obliquely across the field, at a short distance from, and parallel to each other. By means of a line, to which small bells are suspended by threads, two persons may drive all the Quails in the field into the nets; and great numbers, both of males and females, may be procured either for the aviary or table. In August and September the young birds may easily be caught in the fields

which are to lie fallow during the winter ; as, after having been once roused, they remain in the place where they have alighted, and may be taken up by hand. The sex can generally be determined by the colour of the throat and breast ; but if they are too young for this, the males may be distinguished, when brought into the aviary, by their cry of *Vivi, Vivi!* and by their song, which they begin to practise. They are generally full fledged by the end of September.

Attractive Qualities.—The Quail is a clean and lively bird ; and creates amusement by the singular manner on which it walks on tiptoe, with outstretched neck, and continually nodding its head. Its cry, however, which is very peculiar, is its chief recommendation. In pairing time it consists of the syllables *Verra, verra!* very softly uttered, followed by *Pikvervik, pikvervik!* repeated with a loud voice, closed eyes, and a continual nodding of the head. The oftener a bird utters the former of these words, the seldomer does he pronounce the latter ; and a Quail which repeats *Pikvervik!* ten or a dozen times, is highly prized. One in my possession, which is very valuable, usually repeats it fifteen or eighteen times ; has often done so twenty-two times, and once uttered it thirty times in succession. As the Quail's call is chiefly heard in harvest time, the peasants interpret it into *Bück den Rück!* (Bend the Back) and consider it as an exhortation to industry. The song of the female is merely *Verra, verra!* and in pairing time *Peu, peu! Peupeu!* when discontented or alarmed, they utter the syllables *Ghillah* ; and when pleased, a sound like the purring of a cat. If kept in such a cage as is above described, they sing in the day time, whereas, in a light room, they are rarely heard, except at night. The Song birds begin to sing soon after Christmas, and continue to do so till September ; those, however, which have been caught when old do not commence their song till the beginning of May, and cease singing at the end of August.

187. THE ROCK OR BARBARY PARTRIDGE.

Perdix Saxatilis, BECH. *Tetrao Rufus*, LIN. *Perdix Græca*, BRISSON
La Bortavelle, BUR. *Das Seinhuhn*, BECH. *Greek Partridge*, LATH.

Description.—This bird is larger than a Partridge, being thirteen inches in length. The beak and feet are red ; the top of the head, the neck, breast, and all the upper part of the body are ashen grey, tinged with orange on the back and breast. The cheeks and throat are white, encircled by a black streak, which commences at the nostrils, and passes between the eyes. The belly and vent are yellowish, the sides marked with

crescent shaped spots of orange and black; the pen feathers are brown; the foremost having an orange spot not far from the tip, and the shorter ones being tinged with grey. The tail is composed of fourteen grey feathers, of which the five outermost are tipped with orange. The feet are furnished with a blunt spur.

This bird is not to be confounded with the *Tetrao Rufus* of LINNÆUS, the *Perdix Rouge* of BUFFON: the latter is smaller; the front of the head greyish brown; the back reddish brown, with two oblique black spots upon each feather. The upper part of the neck a reddish brown; the back, wings, and rump, greyish brown; the back being somewhat darker than the rest. Behind the eyes is a scarlet warty spot, and the eyelids are also red. The cheeks and throat are white, and enclosed with a black stripe, which commencing at the beak, passes over the eyes, and down the sides of the neck to the breast; becoming gradually broader in its course, and the breast being spotted with white. The breast is pale grey; the belly, sides, thighs, and vent, orange; the sides adorned with white, black, and orange stripes. The pen feathers are greyish brown, edged with yellow near the point of the outer plume, and the hindmost spotted with green; of the tail feathers, which are sixteen in number, the five outermost are orange; the rest greyish brown. This bird is a native of France and Italy.

Observations.—The Rock Partridge is found common in Switzerland and Greece, and is occasionally found in Bohemia, Austria, and the southern provinces of Germany. It seems to prefer mountains and rocky places. Its food consists of grain, seeds, vegetables, and insects, and it is particularly fond of ants' eggs. The cry of the male, which he very frequently utters in the pairing season, is *Khasibis*. Though not so tame as the Quail, it is said to propagate its species in confinement, like the Partridge; and in the island of Scio is driven in flocks to its pastures and back again, obeying meanwhile the whistle of the guide. Its handsome appearance, cheerful disposition, and animated movements are its chief recommendation as an inmate of the aviary.

ADDITIONAL.—This appears to be the *Perdix Petrosa* of LATHAM, TEMMINCK, YARRELL, &c., of which one specimen is recorded to have been found dead at Edmondthorpe, Leicestershire, in 1842, as mentioned by the last named of the above naturalists.

(B.) AQUATIC BIRDS

IX. WADERS.*

THE legs of these birds are more or less bare of feathers above the knee; and are so long as to procure for them, from the common people of Germany, the name of Stilt-walkers. I shall enumerate in this place only ten species, which with care and attention may be tamed at any age.

188. THE WHITE STORK.

Ciconia alba, Ardea Ciconia, LIN. Cicogne Blanche, BUF. Der Weisse Storch, BECH.

Description.—This well-known bird, which, from the fact, that it builds on roofs of houses, and other buildings, is in Germany considered as half domesticated, is three feet and a half in length. Its feet and its large strong beak are similar; the naked circle of the eyes and the pen feathers are black; and the rest of the plumage a beautiful white.

Observations.—The Stork is a bird of passage, which leaves us at the end of September, and returns at the beginning of April. Its food consists of small fishes, frogs, and other amphibious animals, mice, weasels, and, among other insects, bees, of which it collects great numbers from the flowers. Its nest consists of a great number of dry twigs, roughly interwoven. It is repaired and occupied by the same couple year after year; and I have been informed that some nests have been known to remain in the same spots for above a century, in which time many hundred Swallows and Sparrows' nests have collected round them. The connection between male and female lasts during life, and they are models of conjugal fidelity. If the young birds be taken from the nest when half-fledged, and fed with frogs and meat, they will become quite tame, will catch mice and moles in the garden, and may be allowed to fly away, without any fear of their not returning.

At the period of migration it is advisable to clip their wings, and in winter they should be kept in a warm place, as their feet are very apt to suffer from cold. They will eat anything that comes to table, and express their various emotions and desires by a loud clapping with the bill. It is pleasant to watch a tame Stork returning from its wanderings, circling round and round the house, and at last descending upon it in a long spiral line.

* *Gralla Sumpfvoegel, BECH.*

189. THE BLACK STORK.

Ciconia Nigra, LIN. *Cicogne Noire*, BUF. *Der Schwarze Storch*, BECH.

Description.—This is almost as large as the preceding species, and resembles it in form, except that the limbs are more delicate and slender. The general colour of its plumage is a glossy black, but the breast and belly are white. It inhabits woods which are at no great distance from lakes and marshes, and builds its nest in trees. Its habit of life is very similar to that of the White Stork; and the young birds, of which there are often five in a brood, may be reared in the same manner.

190. THE WOODCOCK.

Scolopax Rusticola, LIN. *La Bécasse*, BUF. *Die Waldschneepfe*, BECH.

Description.—The Woodcock, which is a bird well known throughout Europe, is about the size of a Partridge. The beak is straight, and reddish at the root; the forehead is reddish grey; and some blackish brown stripes pass across the back of the head. The upper part of the body and the wings are rust-coloured, striped with black and grey; the breast and belly are dingy white, covered with dark brown lines.

Observations.—The Woodcock builds its nest in the woods on the ground: and the eggs, which are three or four in number, are a dingy pale yellow. As soon as evening approaches it leaves the underwood, to look for its food, which consists of earth worms, snails, and grubs, in the meadows, marshes, and ploughed fields. In October it migrates into warmer countries; and, as it always pursues the same route, the fowler prepares to receive it, as it leaves the woods for the open country, with guns and large nets, in which great numbers are taken. It is an awkward bird, and often overbalances itself in its flight. It is scarcely necessary to add, that the flesh of the Woodcock is highly esteemed by epicures.

This bird soon becomes accustomed to the food of the aviary, if fed, when first caught, with insects and ants' eggs.

191. THE SNIPE.

Scolopax Gallinago, LIN. *La Bécassine*, BUF. *Die Heerschneepfe*, BECH.

Description.—This bird is about the size of a Quail. The beak is long, black at the point, and covered with small lumps; the feet are brown. The head is divided by two reddish brown lines, which pass down the forehead; and the beak is covered with dark brown transverse stripes. The throat is white; the

neck spotted with dark vermillion and brown; the belly white; the vent striped with black. The pen feathers are dark brown, tipped with white; the tail is black at the root, and at the point orange, with a double stripe of dark brown.

Observations.—The Snipe is a native of the northern regions of Europe, Asia, and America, migrating to warmer climates at the approach of winter. Its flight is peculiar; as it suddenly swings itself to a considerable height, and then descends to the ground like an arrow, uttering meanwhile its cry, *Maykeray*. It frequents marshy places, especially if overgrown with bushes; and builds its nest in a hole in the ground close to the water's edge. The eggs, which are four or five in number, are dingy olive green, spotted with brown. Its food consists of worms and grubs, though it sometimes eats grain and the tender roots of marsh plants. When tamed, its habits are very engaging.

192. THE LAPWING.

Tringa Vanellus, LIN. *Le Vanneau*, BUF. *Der gemeine Kiebetz*, BECH.

Description.—This familiar bird, which is about the size of a Pigeon, frequents marshy meadows and morasses, and is found in all parts of Europe. The back and wings are red.

Observations.—The food of the Lapwing consists of water beetles and other aquatic insects, snails, earth worms, and the leaves of various plants. The eggs may be placed under a Pigeon; or, if young birds be caught, they may be fed with ants' eggs, and will soon be content with bran and milk. If the wings of old birds are cut, they may be safely turned into the garden, where they are very useful in destroying noxious insects and worms. In winter, however, they must be brought into the aviary, and fed on bullock's heart cut into long strips, from which they will soon become accustomed to eat other meat, and will at last be content with bread. Where flocks of them have been observed, they are often caught for the table in barn-floor traps, baited with earth worms. They may also be taken in horse-hair nooses, set near their nests.

193. THE RUFF.

Tringa Pugnax, LIN. *Le Combattant, ou Paon de Mer*, BUF. *Der Kampfhahn*, BECH.

Description.—The Ruff, which is found among the lakes and wide morasses of Northern Europe, is nearly as large as the Lapwing. It is remarkable as being almost the only wild bird whose plumage varies like that of our domesticated Poultry; grey, rust colour, black, and white being so variously mingled one with

the other, that no two birds of this species are exactly alike. The feet and beak are, however, always red; the face is red and covered with warts; and there is a collar, composed of long feathers, round the neck, which the bird erects when angry.

The colours in the plumage of the female are less variable. She is pale brown; the back being spotted with black; and the breast and belly white. She has no collar.

Observations.—The Ruff feeds upon worms, insects, and marsh grasses, and generally builds its nest in some wet meadow, upon a dry turf, or among rushes. The flesh of the female is palatable, but the males must be fattened before they are fit for the table. The latter are particularly noticeable for their quarrelsome disposition. If several are confined in a cage, the strongest kills the rest; and they are so engaged during the combat, that a net may be thrown over them without their perceiving it. They are easily tamed, especially when young; and it is worthy of notice, that those reared from the nest in the aviary, never manifest this disposition to quarrel; although in the case of most birds the contrary effect is observed to be produced. They may be fed on meat, or bread and milk.

194. THE PURR.

Tringa Cinclus, LIN. *L'Alouette de Mer*, BUF. *Die Meerlerche*, BECH.

Description.—This marsh bird, which is about the size of a Redwing Thrush, is common on the banks of all large rivers and lakes, and may be recognised by its loud clear cry of *Tzi, tzi, tzi!* uttered as it rises in the air. The beak is black; the feet dark brownish green. The feathers of all the upper part of the body are bright and silky in texture, and in colour dark grey, composed of fine black lines, and edged with rust colour. A white stripe passes over, and a narrow dark brown line between the eyes. The under part of the body is a beautiful white; the breast being striped with dark brown. The pen feathers are blackish brown; the foremost having large white spots on the inner, the rest on both plumes. The large coverts are tipped with white, which produces two white spots on the wings; the three centre feathers of the tail are greyish brown, with transverse stripes of black; the rest white, edged with dark brown.

The female is a little larger, and somewhat lighter in colour.

Observations.—The Purr is easily tamed, and, on account of its beauty and interesting habits, is quite worthy of a place in the aviary. It is particularly rapid in its gait, keeps the hinder

part of its body in continual motion, and utters its call, *Hidutz!* incessantly, especially in the evening twilight. In a wild state it eats aquatic insects and worms ; and in the aviary is soon content with the universal paste, if fed when first caught with a few meal worms, or ants' eggs. It will also eat poppy and rape seed, and is a greedy bird, carrying all its food to the water vessel, in order to make it as moist as possible, and thus incommoding the other birds kept with it. Its mode of catching flies is very curious. It creeps slowly up to them, with its head down, and, when fairly within reach, darts on them with the rapidity of lightning. Like all birds of its species, it is also in the habit of turning over all the stones in its way, in order to see if there be any insects beneath.

The Purr may easily be caught, by setting limed twigs near the places on the sea side where it is observed habitually to perch. To these it may then be gently and cautiously driven.

195. THE MOOR HEN.

Fulica Chloropus. LIN. *La Ponle d'Eau,* BUF. *Das Grünfüssige Meehuhn,* BECH.

Description.—This bird, which is found on almost every pool in Germany, is one foot in length ; the beak is orange with a greenish tip ; the bare forehead, and the naked spaces above the knees are also orange. The feet and claws, which are disproportionately long, are olive green ; the head, the upper part of the neck, body, and wing coverts are dark olive green ; the foremost pen feathers and the tail dark brown ; the breast and belly ashen grey ; the vent and the edges of the wings white. In the female also, the forehead is bare, but olive brown.

Observations.—Although the Moor Hen is not web-footed, it is an excellent swimmer ; and possesses the additional advantage of being able to perch and roost upon the bushes at the water side, and to run upon the ground. Its nest, which is composed of water plants finely interwoven, is so strongly attached to the bushes or reeds by the water side, as to float in case of an inundation, without being carried away, and so preserve its contents from harm. Its food consists of aquatic insects, and the leaves and seeds of aquatic plants. It is easily tamed, especially when young, and will eat bread and milk. I have myself kept several of these birds in the farm-yard with the poultry, which were tamed with very little trouble, and though in the habit of paying a daily visit to the nearest pool, they never failed to return. Their usual station throughout the day was the dunghill, where they were always occupied in picking up insects or grubs.

196. THE CORNCRAKE.

Rallus Crex, LIN. *La Rale de Cenét, ou Roi des Cailles*, BUF. *Der Wachtel König*, BECH.

Description.—The fact that the Corncrake is common when the Quail is so, and *vice versa*—that it migrates at the same time in autumn, and returns with it in spring—is doubtless the reason why it is known in France and Germany by the name of the Quail King. It is ten inches in length, and about the size of the Missel Thrush. The beak is compressed at the sides; the upper mandible brownish grey; the lower flesh colour; the feet a light lead colour. The feathers of the head, neck, back, and tail are black, edged with reddish grey, which gives all these parts a spotty appearance, and produces on the back and shoulders five longitudinal black stripes. A grey streak passes above and below the eyes; and a reddish grey stripe runs from the root of the beak between them. The wing coverts and foremost pen feathers are brownish red; the neck and breast dingy grey; the belly white, striped with rust colour on the sides and vent; the rust coloured stripes being edged with dark brown. The female is pale grey on the breast, and the two stripes near the eyes are greyish white.

Observations.—The Corncrake is rarely seen on the wing; but the harsh cry of the male, *arrp ! shnarrp !* may be frequently heard from the meadows in the evening and early part of the night. It feeds on insects and seeds; and in confinement thrives on bread and milk, or on wheat, barley, or millet. The female lays her eggs, which are from eight to twelve in number, and greenish grey, speckled with light brown, on the bare ground; and sits so steadily and constantly, as often to be killed by the scythe of the mower. The young when first hatched are covered with black down, and are not fully fledged for three weeks. In autumn they run among the oat stubble with the Quails, and may then be caught by the hand. The chirping of the Corncrake, when in confinement, is not unlike that of a chicken; and the *arrp ! shnarrp !* of the male is to me a very pleasant sound, when heard on a calm evening. At pairing time also, they make a purring noise like a cat; which, if the bird be taken in the hand, will appear to proceed, not from the beak, but the stomach.

197. THE WATER RAIL.

Rallus Porzana, LIN. *Petite Rale d'eau, ou Marionette*, BUF. *Die Mittlere Wasser Ralle*, BECH.

Description.—This bird is about the size of a Quail, and resembles the foregoing in form and habits. The beak and feet

are greenish ; the claws long ; the feathers on the upper part of the body blackish, edged with olive colour, and covered with small white stripes. The under part of the body is grey, spotted with white ; and the two centre tail feathers are bordered with white.

Observations.—The Water Rail is a solitary bird, inhabiting the bulrushes and sedge on the banks of lakes, rivers, and pools. I never kept one myself, but Lieut. VON SCHAUROTH writes to me as follows, respecting one formerly in his possession. “ It was exceedingly tame. At the slightest gesture from me, it would crouch motionless upon the ground ; but it usually ran about the room, with outstretched head, and with great rapidity. If taken up, it would twist itself out of my hands like an eel. It eat the Nightingales’ paste ; but did not seem to like either worms or insects. It bathed many times a day, laying down on its side, as hens do in sand. Its cry may be represented by the word *Seek!* dwelt on for a long time ; and it also occasionally uttered a barking sound like a young dog. This handsome bird was caught in a noose, near a warm spring, in winter. When it flew, which was very seldom, it was in perfect silence. It was very restless at night, especially if the moon were bright. It was sociable with other birds ; and was exceedingly friendly with a Starling, which it soon allowed to stroke its feathers. It eats very little.”

Dr. MEYER of Offenbach has also several of these birds. They eat barley, groats, and milk, and seem particularly fond of millet.

X. WEB-FOOTED BIRDS.

The birds of this order are distinguished by their feet, which are webbed ; that is, have the claws connected by a membrane. Some of them never leave the water ; others unite in flocks, both in the water and on land. Many of them may be tamed, but I shall only enumerate six species, which may be kept in the aviary, and can live without water. They are tameable at any age.

198. THE SWAN.

Anas Olor, LIN. *Le Cygne*, BUF. *Der Stumme Schwan*, BECH.

Description.—This, which is commonly called the Tame Swan, I have chosen to denominate the Mute Swan, in order to distinguish it from the Wild or Whistling Swan ; which is smaller, has no nob upon the beak, and carries its neck erect. The latter, which is found wild in almost all parts of Europe, and is very numerous in Siberia, is more commonly tamed in Russia than the species under consideration. If the possessor



1 The Hooper. 2 The Mute Swan. 3 The Bewick's Swan. 4 The Polish Swan.

of a piece of water in Germany wishes to keep these birds throughout the winter, he chooses a pair of young ones, and cuts or otherwise disables the first joint of their wings. They will then be prevented from joining their comrades in the autumnal migration.

The Mute Swan is considerably larger than the Domestic Goose ; as it often weighs from twenty-five to thirty pounds. Owing to its long neck, which it curves to the shape of the letter S when swimming, it measures four feet and a half, and from tip to tip of the expanded wings seven feet and a quarter. The beak is dark red, provided at the end with a black nail or claw curved inwards, and overgrown at the root, with a large round black knob. Between the beak and the eyes is a triangular, black, naked membrane. During the first year the feet are black ; in the second, lead coloured, and afterwards, cinnabar red. The whole plumage is snowy white.

Observations.—It is hardly necessary to remark, that the story of the Swan's dying song is an invention of the poets ; and that the whistling Swan is the only bird of this species which is at all capable of uttering anything like a song. The structure of the larynx of the Tame or Mute Swan is so exceedingly simple, as to preclude it from producing anything more than a low hiss, a deep humming sound, and a gentle cackling. Its food consists of aquatic plants and insects, especially beetles ; though in winter it must be fed with grain, and protected in some degree from the severity of the weather. The nest, which is built of sedge, rushes, &c., lined with the down from the breast of the female, generally contains six or eight greenish white eggs. During the period of incubation, which lasts for five weeks, the male keeps guard over the nest, attacks everything that approaches, and is, indeed, a very formidable assailant, as he is said to be able to break a man's arm or leg, by a blow of his wing. The Cygnets, when first hatched, are grey ; and the bird is said to live a hundred years.

The Swan is better worth the trouble of keeping than is sometimes supposed, not only on account of its beauty, but of the profit which may be derived from it. It requires less care and attention than the Goose, and its feathers are far more valuable. Large quantities of them are every year brought to the fair at Frankfort on the Oder, from Lithuania, Poland, and Prussia ; and the wild Swans on the Spree, near Berlin, Spandau, and Potsdam, are generally collected in May, to be *plucked*. The skins, with the down on them, are also applied to the same purposes as furs, and are made into powder puffs. The Cygnets are considered a great delicacy.

199. THE SHELDRAKE.

Anas Tadorna, LIN. *La Tadorne*, BUF. *Der Brandente*, BECH.

Description.—The Sheldrake is two feet in length. The beak, the base of which is covered with a fleshy lump, is smooth, flattened, and scarlet. The nail at the end of it, and the nostrils, are black. The feet are flesh-coloured; the head and upper part of the neck dark green; the rest of the neck and the belly white. A broad, brownish orange transverse band runs across the breast; the back and the wing coverts are white; the scapulars spotted with black. The first pen feathers are black, the next violet, the middle rust-coloured, and the last white. The hinder parts are green, shot with violet; the pen feathers white, tipped with black.

Observations.—The Sheldrake inhabits the northern coasts of the Old Continent, and either burrows in the sea shore, or builds its nest in some cranny of the rock. It has been tamed, and kept in the poultry yard, on account of its beauty alone, for its flesh has a rancid flavour. It feeds with the other Ducks.

200. THE BEAN GOOSE.

Anas Segetum, LIN. *L'Oie Sauvage*, BUF. *Die Saat Gans*, BECH.

Description.—This bird is smaller than our common Goose, but has a larger neck, and longer wings. The upper part of the body is brownish grey; the under part greyish white; the belly mottled with dingy orange; the shanks vermillion. The beak is black, except about the centre, where it is orange, and somewhat curved. This is not, as some suppose, the original stock of our common Goose. The species in question inhabits the shores of the German Ocean, and exactly resembles in appearance our domestic Grey Goose.

Observations.—These birds inhabit the shores of the Baltic and North Seas, but in autumn repair in large flocks to more southern regions, where they remain throughout the winter, feeding on the fields of rye. In some parts of Thuringia, they may be seen in thousands. They are very shy, and place sentinels round their encampment, on which account it is difficult either to catch or shoot them. They are, however, occasionally taken by means of nooses, placed in spots where they have been seen to spend the night; and wounded birds will live sociably with the other poultry in the farm-yard. I only know of one instance,

however, in which a Bean Goose has paired with the common domestic Goose.

201. THE SCAUP DUCK.

Anas Marila, LIN. *Le Milloninan*, BUF. *Die Bergente*, BECH.

Description.—This Duck, which inhabits the northern regions of Asia, Africa, and America, migrates southward in autumn and winter; when it may be caught or shot, with other species. It is exceedingly tame, soon becomes accustomed to the farm-yard, and is fond of bread soaked in water, dry or moistened oatmeal, groats, &c. It is almost as large as the common Duck. Its prevailing colour is black; but the belly and speculum are white. The wings, shoulders, and back are white, covered with five black transverse lines; the wings and tail are blackish.

202. THE MALLARD.

Anas Boschasfera, LIN. *Le Canard Sauvage*, BUF. *Die Wilde Ente*, BECH.

Description.—The Mallard is the original stock from which our domestic Ducks are derived, and is found all over Europe. It is two feet in length; and the general colour of its plumage is ashen grey, transversely striped, and mottled with brown and white. The head and neck are dark green; the breast chestnut, and the speculum violet green. The female is grey, like a Lark.

Observations.—Like all Wild Ducks, the Mallards divide into pairs during the summer, and collect in large flocks only at the approach of autumn. They build in reeds or in old stumps near the water, and the female lays from twelve to sixteen eggs. In the Thuringian forest, broods are often found, which have been conducted by the parent birds to the nearest pond, and there left. These, if the first joint of their wing be taken off, may be safely left with the Tame Ducks; will eat the same food, pair with them, and follow them in the winter into the farm yard. They may be taken with nets, or even fish hooks, and on the barn floor trap.

203. THE TARROCK.

Larus Tridactylus, LIN. *La Monette Cendrée*, BUF. *Die Winternöwe*, BECH.

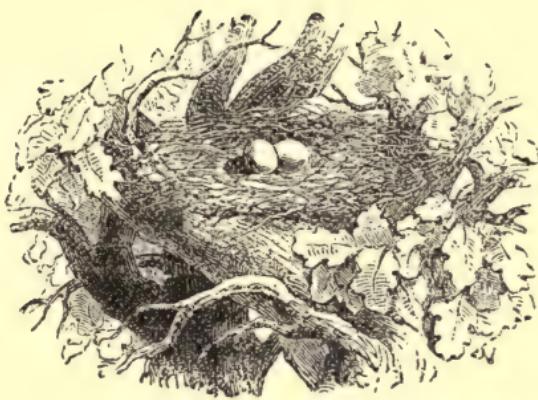
Description.—The Tarrock, which is fourteen inches in length, changes the colour of its plumage every year till the

fourth. The beak of old birds is greenish yellow; the inside of the mouth orange; the feet olive brown, and without the hinder claw. The head, throat, neck, lower part of the body and tail are white; and there is often a black spot behind each ear. The back and wing coverts are pale or bluish grey; the pen feathers white, the first row being tipped with black. Those birds which have a dark grey crescent shaped spot on the nape of the neck, are less than four years old.

Observations.—The Tarrock inhabits the northern countries of Europe, and migrates southward in winter. If, after an interval of fine weather, we have a snowy February, this bird may be seen in Germany in great numbers, and many perish from cold. At such a time they may easily be caught by nets and nooses, set on a spot of ground which has been cleared from snow. Their natural food consists of fishes and aquatic insects; but when tamed, they are content with bread and other food, and live equally well on land and in the water. During the winter they may be kept in a room, which should not be very warm; or may even be allowed to range the yard, provided they be driven every night to an appropriate sleeping place.



NEST OF THE BULLFINCH.



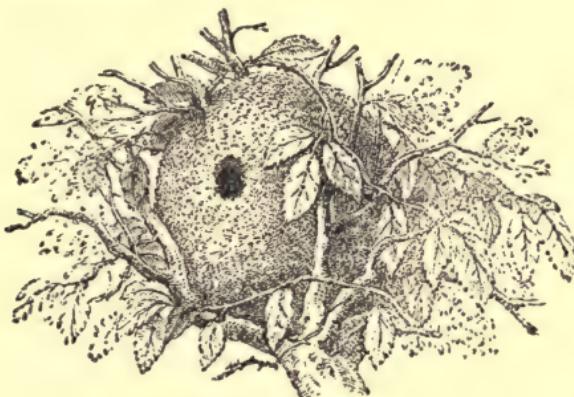
NEST OF THE WOODPIGEON.



NEST OF THE GOLDFINCH.



NEST OF THE THRUSH.



NEST OF THE BOTTLE-TIT.

INDEX.

	Page		Page
<i>Accenter Alpinus</i>	434	Barley Bird.....	273
<i>Accenter</i> , Alpine.....	434	Barn Owl	57
— Hedge	394	Bearded Tit	456
<i>Alauda Alpestris</i>	318	Bean Goose	488
— <i>Arborea</i>	314	Billybiter.....	451
— <i>Arvensis</i>	306	Blackbird	346
— <i>Campestris</i>	323	— Moor.....	351
— <i>Cristata</i>	312	— White-breasted	351
— <i>Pratensis</i>	324	Blackcap	373
— <i>Spinolaetta</i>	326	Black-capped Lory	144
— <i>Trivialis</i>	319	Black-clouded Grosbeak	208
<i>Alcedo Ispida</i>	164	Black Redstart	386
Alp	186	— Stork	481
Alpine Warbler	434	Blackytop	434
<i>Amandava</i>	199	Blossom-headed Parrakeet ..	129
*Amazon Parrot	145	Blue and Yellow Macaw ..	124
Amboina Parrot	136	Blue-bellied Finch	303
American Goldfinch	262	Bluebreast	399
<i>Ampelis Garrulus</i>	333	Bluecap	451
<i>Anas Boschas fera</i>	489	Blue Grosbeak	203
— <i>Marila</i>	489	Blue-headed Parrot	126
— <i>Olor</i>	486	Blue-necked Parrot	147
— <i>Segetum</i>	488	Blue-throated Warbler	399
— <i>Tadorna</i>	488	Blue Tit	450
Angola Finch	305	Bohemian, or Waxen Chat- terer	333
Arbour Bird	403	Bornean Parrakeet	130
Ash-coloured Parrot	140	Brakehopper	413
Azure Grosbeak	204	Brambling	246
Babillard	383	Brazilian Finch	303
Banded Grosbeak	205	Brown-cheeked Grosbeak	207
Banksian Cockatoo	139	Bullfinch	181
Barbary Partridge.....	478	— Pine	180

	Page		Page
Bunting, Black-headed	227	Cole Tit	447
— Cirl.....	220	Collared Dove	468
— Common	216	— Turtle	468
— Corn	216	Common, or Corn Bunting ..	216
— Dominican	229	— Redstart	388
— Foolish	222	— Wagtail	436
— Green-headed	220	<i>Columba</i> <i>Oenas</i>	460
— Indigo.....	230	— <i>Domestica</i>	469
— Mountain	212	— <i>Palumbus</i>	463
— Orlolan	218	— <i>Risoria</i>	468
— Painted	231	— <i>Turtur</i>	465
— Reed	224	<i>Coracias Garrula</i>	104
— Ring	227	Corn Crake	485
— Shaft-tailed	230	<i>Corvus Caryocatactes</i>	99
— Snow	209	— <i>Corax</i>	74
— Sparrow.....	227	— <i>Cornix</i>	85
— Tawny	210	— <i>Corone</i>	81
— Whidah	228	— <i>Frugilegus</i>	87
— Yellow	215	— <i>Glandarius</i>	95
Bushchat, Black-headed	434	— <i>Monedula</i>	90
Bush-hopper, Sibilous	413	<i>Corvus Pica</i>	100
Butcher Bird	62	Crested Lark	312
— Least	457	Cricket Bird	413
Caffrarian Grosbeak	203	Crossbill	172
Canary	277	— Parrot	177
Cape Grosbeak	202	— White-winged	179
Cardinal Grosbeak	196	Crow, Bare-faced	88
— Parrot	129	— Black	81
Carriion Crow	81	— Carrion	81
Ceram Lory	142	— Corby	81
Chaffinch.....	232	— Flesh	81
Chanter, Alpine	434	— Gore	81
— Hedge	394	— Hooded	85
Chatterer	333	— Water	332
— Black-headed	335	<i>Cuculus Canoris</i>	113
— Bohemian	333	— <i>Persa</i>	163
— Waxen	333	Cuckoo	113
Chink	227	Cushat	464
Chirper, Grasshopper.....	413	Dartford Warbler	416
<i>Ciconia Alba</i>	480	Devil's Bird	215
— <i>Nigra</i>	481	Dipper	332
Cirl Bunting	220	Dishwasher	438
Citril Finch	274	Dominican Bunting	229
Coal-hood	186	— Grosbeak	201
Cockatoo, Banksian	139	Dove, Blue-backed	462
— Great Red-crested ..	138	— Collared	468
— Great White	137	— Ring	463
— Lesser White	138	— Stock	460
— Red-vented	139	— Turtle	465

	Page		Page
Dove, White-backed	471	Foolish Bunting	222
— Wood	462	<i>Fringilla Angolensis</i>	305
— Veiled	470	— <i>Bengalus</i>	303
Duck, Scaup	489	— <i>Cælebs</i>	232
Ducker	332	— <i>Canaria</i>	277
Dunnock	391	— <i>Cannabina</i>	252
<i>Emberiza Cia</i>	222	— <i>Carduelis</i>	262
— <i>Ciris</i>	231	— <i>Citrinella</i>	274
— <i>Cirlus</i>	220	— <i>Domestica</i>	247
— <i>Citrinella</i>	213	— <i>Granatina</i>	303
— <i>Cyanea</i>	230	— <i>Hepatica</i>	304
— <i>Hortulana</i>	218	— <i>Laponica</i>	275
— <i>Miliaria</i>	216	— <i>Linaria</i>	259
— <i>Montana</i>	212	— <i>Melba</i>	304
— <i>Nivalis</i>	209	— <i>Montifringilla</i>	245
— <i>Paradisea</i>	228	— <i>Montana</i>	251
— <i>Passerina</i>	227	— <i>Nitens</i>	301
— <i>Regia</i>	230	— <i>Nivalis</i>	276
— <i>Schœnulus</i>	224	— <i>Petronia</i>	273
— <i>Serena</i>	229	— <i>Purpurea</i>	301
Falcon, Kestrel	54	— <i>Serinus</i>	194
<i>Falco Tinnunculus</i>	54	— <i>Spinus</i>	269
Fantail, Blue-throated	403	— <i>Tristis</i>	302
Fauvette	378	<i>Fulica Chloropus</i>	484
Feltyfare, or Feltyflier	343	Furzeling	416
Fieldfare	342	Glossy Finch	301
Field Lark	323	Goldfinch	262
Finch, Angola	305	— American	302
— Beech	245	— Black	263
— Blue-bellied	303	— Black-headed	263
— Brazilian	303	— Green	304
— Caffrarian	203	— White	263
— Citril	274	— White-headed	263
— Glossy	301	— Yellow-breasted	263
— Greater Redpole	257	Golden Oriole	107
— James'	237	— Crested Wren	422
— Lapland	275	Goose, Bean	488
— Lark	275	Gowk	117
— Liver-coloured	304	Gowry Grosbeak	205
— Mountain	245	<i>Graccula Religiosa</i>	117
— Purple	301	Grackle, Minor	117
— Serin	194	Grasshopper Warbler	413
— Siskin	269	Great Woodpecker	156
— Snow	276	Green Bird	188
— Thistle	267	Greenfinch	188
— — Black-headed	273	Green Goldfinch	304
Fir Grosbeak	177	— Macaw, Great	125
Flasher, or Flusher	74	— Woodpecker	153
		Grenadier Grosbeak	201

	Page		Page
Grey-breasted Parrot	134	Kinglet, Gold-crowned	425
Grey Dun	85	<i>Lanius Collurio</i>	70
— Wagtail	439	— <i>Erythrocephalus</i>	68
Grosbeak, Azure	204	— <i>Excubiter</i>	62
— Banded	205	— <i>Minor</i>	65
— Black	208	Lapland Finch	275
— Black-clouded	208	Lapwing	482
— Blue	203	Lark, Black	307
— Brown-cheeked	207	— Crested	312
— Caffrarian	203	— Field	323
— Cape.....	202	— Field, Short-heeled	325
— Cardinal	196	— Horned	318
— China	207	— Meadow	324
— Dominican	201	— Shore	318
— Fir	177	— Sky	306
— Gowry	205	— Tit	319
— Green	191	— Water	326
— Grenadier	201	— White	307
— Malacca	207	— Wood	314
— Molucca	208	<i>Larus Tridactylus</i>	489
— Paradise	209	Lesser Grey Shrike	65
— Pine	179	— White Cockatoo	138
— Red-billed	200	— Woodpecker	158
— Yellow-bellied	204	Linnet	252
Haleyon	165	— Brown	256
Haybird	408	— Grey	253
Hawfinch	191	— Mealy	261
Hedge Warbler	391	— Mountain	261
Heedy Royston	85	— Rock	253
Heitre	165	— Rose	256
Hickwall	451	— Whin	256
Hooded Crow	85	— Yellow	253
Hoody Bran	81	Lintie, or Lintwhite	256
Hoopoe	109	Liver-coloured Finch	304
House Sparrow	247	Long-tailed Green Parrakeet	127
Huck-muck	458	— Tit	417
Illinois Parrot	125	Lory, Black-capped	144
Indigo Bunting	230	— Ceram	142
Jackdaw	90	— Purple-capped	143
Jacobin Pigeon	471	<i>Loxia Amandava</i> :	199
Java Sparrow	198	— <i>Astrid</i>	198
Jay	94	— <i>Cærulea</i>	203
— Birch	107	— <i>Caffra</i>	203
Kestril	54	— <i>Canora</i>	207
Keelie	56	— <i>Capensis</i>	202
Kingfisher	164	— <i>Cardinalis</i>	196
		— <i>Chloris</i>	188
		— <i>Coccothraustes</i>	191
		— <i>Curvirostra</i>	172

	Page		Page
<i>Ioxia Cyanea</i>	204	Nightingale, Vienna	373
— <i>Dominicana</i>	201	— Virginian	197
— <i>Enucleator</i>	179	Nope	186
— <i>Erythrocephala</i>	200	Nutcracker	99
— <i>Fasciata</i>	205	Nuthatch	168
— <i>Flaviventris</i>	204	Oatear	443
— <i>Malacca</i>	207	Oatfowl	211
— <i>Nobilosa</i>	208	Oatseed Bird	443
— <i>Orix</i>	201	Oriole, Golden	107
— <i>Orycivora</i>	198	<i>Oriolus Galbula</i>	107
— <i>Punctularia</i>	205	Ortolan Bunting	218
— <i>Pyrrhula</i>	181	Ouzel, Garden	348
— <i>Ptyiopsittacus</i>	177	— Ring	350
— <i>Sanguinirostris</i>	209	— Rock	351
— <i>Serinus</i>	194	— Tor	351
Macaw, Blue and Yellow	124	— Water	331
— Great Green	125	Owl, Barn	56
— Red and Blue	122	— Hawk	61
Magpie	100	— Little	59
— French	157	— Passerine	61
Malacca Grosbeak	207	— White	57
Mallard	489	Oxeye	443
Marked Pigeon	470	Painted Bunting	231
Marsh Tit	453	Paradise Grosbeak	200
Mavis	340	Parrakeet, Blossom-headed	129
Mag, Long-tailed.	458	— Bornean	130
Meadow Lark	324	— Long-tailed Green	127
Mealy Linnet	261	— Rose-headed	130
Merle	348	— Rose-ringed	133
Middle Woodpecker	158	— Red and Blue-headed	128
Minor Grackle	117	— Red-crescented	133
Missel Thrush.	335	Parrot, Amazon	145
Moor Hen	484	— Amboina	136
Monk	470	— Ash-coloured	140
Moss-cheeper	322	— Blue-headed	126
Motacilla Accredula	408	— Blue-necked	147
— <i>Alba</i>	436	— Cardinal	129
— <i>Alpina</i>	434	— Crossbill	177
— <i>Boarula</i>	439	— Carolina	135
— <i>Flava</i>	441	— Grey-breasted	134
— <i>Rufa</i>	410	— Illinois	125
Mountain Bunting	212	— Pavonian	128
— Finch	245	— Rose-headed Ring	130
— Linnet	261	— Purple	130
Mufflin, Long-tailed	458	— Whiskered	132
Nightingale	355	— White-fronted	144
— East Indian	401	— Yellow	127
— Greater	372	— Yellow-headed	146
— Italian	401	Partridge	473

	Page		Page
Partridge, Barbary.....	478	<i>Psittacus Cyanocephalus</i>	126
— Rock	479	— <i>Domicella</i>	143
<i>Parus Ater</i>	447	— <i>Erythacus</i>	140
— <i>Biarmicus</i>	450	— <i>Garrulus</i>	142
— <i>Cæruleus</i>	450	— <i>Guianensis</i>	128
— <i>Caudatus</i>	457	— <i>Leucocephalus</i>	144
— <i>Cristatus</i>	454	— <i>Lory</i>	144
— <i>Major</i>	443	— <i>Lunatus</i>	133
— <i>Palustris</i>	453	— <i>Macao</i>	122
Pavonian Parrot	128	— <i>Menstruus</i>	147
Peacock, or Fan-tailed Pigeon	471	— <i>Militaris</i>	125
Perriwigged Pigeon	471	— <i>Moluccensis</i>	139
Pettichap	378	— <i>Murinus</i>	134
— Lesser	405	— <i>Ocrocephalus</i>	146
Pick-a-bud	186	— <i>Passerinus</i>	149
<i>Picus Major</i>	156	— <i>Pennanti</i>	130
— <i>Medius</i>	158	— <i>Pertinax</i>	125
— <i>Minor</i>	185	— <i>Phillippinarum</i>	138
Piet, Water	332	— <i>Rufirostres</i>	127
Pigeon, Carrier	473	— <i>Solstitialis</i>	127
— Jacobine	471	— <i>Sulphureus</i>	138
— Marked	470	Pump-borer	159
— Peacock, or Fantailed	471	Purple-capped Lory	143
— Perriwigged	471	Purple Finch	301
— Rock	469, 471	— Parrot	130
— Shield	470	Purr	483
— Starling-necked	470	Quail	475
— Striped Starling-neck	470	Quake-tail	442
— Swallow	407	Rail, Water	485
— Turkish	471	<i>Rallus Crex</i>	485
— Wild	471	— <i>Porzana</i>	485
— Wood	464	Raven	74
Pine Grosbeak	179	Red and Blue Macaw	122
Pinnock, Bearded	457	Redbreast	395
Pipit, Meadow	322	Red-backed Shrike	70
— Tree	325	Red-billed Grosbeak	209
Poke-pudding	458	Red-crested Cockatoo, Great	138
Pope	186	Red-hoop	186
Pouter	470, 471	Redpole, Greater	256
Preacher Toucan	150	— Lesser	259
<i>Psittacus Eustivus</i>	144	— Mealy	262
— <i>Alexandri</i>	136	Red-vented Cockatoo	139
— <i>Amboinensis</i>	136	Redwing	344
— <i>Ararauna</i>	124	Red-wing Thrush	344
— <i>Autumnalis</i>	146	Redstart, Common	388
— <i>Banksii</i>	139	— Black, or Tithys	386
— <i>Bimaculatus</i>	132	Red-tail, Black	388
— <i>Canicularis</i>	128	Reed Bird, Bearded	437
— <i>Carolinensis</i>	135		
— <i>Cristatus</i>	137		

	Page		Page
Reed Bunting	224	Sparrow, Hedge	394
— Thrush	352	— House	247
— Wren	406	— Java	198
Reedling, Sedge	411	— Reed	227
<i>Rhamphastos Picatus</i>	150	— Ring	273
— <i>Piscatorius</i>	150	— Tree	251
— <i>Tucanus</i>	140	— Water	227
Rice Bird	198	Standgale	56
Ring Bird	227	Stare	329
Ring Dove	463	Starling	327
— Ousel	350	Starling-necked Pigeon	470
— Sparrow	273	Stock Dove	460
Robin	398	Stonechat	432
Rock Dove	471	Stonechatter	434
Rock Pigeon, Wild	469	Stone Smith	434
— Partridge	187	Stork, Black	481
— Thrush	353	— White	480
Roller	104	Storm Cock	337
Rook	87	Striped Monk	470
Rose-headed Ring Parrakeet	130	<i>Strix Flammea</i>	57
Ruff	482	— <i>Passerina</i>	59
Rufous Warbler	410	<i>Sturnus Cinclus</i>	331
		— <i>Vulgaris</i>	327
Scaup Duck	498	Swallow Pigeon	470
Sedge Bird	411	Swan	486
Sedge Warbler	411	Swinepipe	345
Serin Finch	194	<i>Sylvia Cenanche</i>	426
Shaft-tailed Bunting	230	— <i>Arundinacea</i>	406
Sheldrake	488	— <i>Atricapilla</i>	373
Shellapple	245	— <i>Cinerea</i>	380
Shield Pigeon	470	— <i>Dartfordiensis</i>	416
Shilfa	245	— <i>Hippolais</i>	403
Shore Lark	318	— <i>Hortensis</i>	378
Shrike, Ash-coloured	62	— <i>Locustella</i>	413
— Great	62	— <i>Luscinia</i>	355
— Lesser Grey	65	— — <i>Major</i>	372
— Red-backed	70	— <i>Modularis</i>	391
— Woodchat	68	— <i>Phænicurus</i>	388
Shufflewing	394	— <i>Regulus</i>	422
Siskin	269	— <i>Rubetra</i>	428
<i>Sitta Europaea</i>	168	— <i>Rubicola</i>	432
Skite	215	— <i>Rubecula</i>	395
Skylark	306	— <i>Salicaria</i>	411
Snipe	481	— <i>Sueciva</i>	399
Snow Finch	276	— <i>Sylvicola</i>	414
Snowflake	210	— <i>Tithys</i>	386
Snowfowl	210	— <i>Troglodytes</i>	419
Song Thrush	338		
Sparrow Bunting	227	Tarrock	489
Sparrow, Guinea	138	<i>Tetrao Coturnix</i>	475

INDEX.

499

	Page	Page	
<i>Tetrao Perdrix</i>	473	Twite	262
— <i>Rufus</i>	478	Turtle, Ring-necked	447
Throstle	340		
Thrush, Black	348	<i>Upupa Epops</i>	109
— Garden	340	Veiled Dove	470
— Grey	337		
— Holm	337	Wagtail, Black and White ..	438
— Wind	345	— Blue-headed	442
— Missel	335	— Common	436
— Redwing	344	— Grey	439
— Reed	352	— Pied	438
— Ringed	351	— Water	438
— Rock	353	— White	438
— Screech	337	— Winter	438
— Song	338	— Yellow	441
Tit, Bearded	456	Warbler, Alpine	434
— Blue	450	— Grasshopper	413
— Bottle	458	— Hedge	391
— Cole	447	— Blue-throated	399
— Crested	454	— Dartford	416
— Lark	319	— Rufous	410
— Long-tailed	457	— Sedge	411
— Marsh	453	— White-breasted	383
Titling	395	— Wood	414
Titmouse, Greater	443	Water Bird	338
Tomtit	451	— Lark	326
— Black-headed	446	— Ouzel	331
Tony-hoop	186	— Rail	485
Toucan, Brazilian	159	Waxbill	198
— Preacher	150	Waxen Chatterer	333
— Yellow-breasted	140	Wheatear	426
Tourako	163	Whidah Bunting	228
Tree Sparrow	251	Whinchat	428
<i>Tringa Cinclus</i>	483	White-breasted Warbler	383
— <i>Pugnax</i>	482	White Cockatoo, Great	137
— <i>Vanellus</i>	482	— — Lesser	138
Trumpeter Pigeon	470	— Owl	57
Tumbler	471	— Stork	480
<i>Turdus Arundinaceus</i>	352	White-fronted Parrot	144
— <i>Illacus</i>	344	Whitehead Pigeon	470
— <i>Merula</i>	346	— Striped Starling-neck	470
— <i>Musicus</i>	338	Whitetail	426
— <i>Pilaris</i>	342	Whitethroat	380
— <i>Saxatilis</i>	353	Whiskered Parrot	132
— <i>Torquatus</i>	350	Whitwall	155
— <i>Viscivorus</i>	335	Willow Wren	408
Turkish Pigeon	471	Windhover	56
Turtle Dove	465	Woodchat Shrike	68
Twink	245	Wood Lark	314

	Page		Page
Wood Wren	414	Wren, Sedge	411
Woodpecker, Great	156	— Willow	408
— Green	153	— Wood	414
— Lesser	158	— Yellow	414
— Middle	158	Wryneck	160
— Pied	157		
— Striated	158	Yaffler	155
Woodpie	157	Yeldring, Yellow	215
Woodspite	155	Yeldrock	215
Woodwall	155	Yellow-bellied Grosbeak	204
Woodwele	318	Yellow-breasted Toucan	149
Woosel Cock	350	Yellow-hammer	213
Wren	416	Yellow-headed Parrot	146
— Furze	416	Yellow Parrot	127
— Golden-crested	422	— Wagtail	441
— Reed	406	<i>Yunx Torquilla</i>	160

THE END.

*CATALOGUE OF
BOHN'S LIBRARIES.*

N.B.—It is requested that all orders be accompanied by payment. Books are sent carriage free on the receipt of the published price in stamps or otherwise.

The Works to which the letters ‘N. S.’ (denoting New Style) are appended are kept in neat cloth bindings of various colours, as well as in the regular Library style. All Orders are executed in the New binding, unless the contrary is expressly stated.

Complete Sets or Separate Volumes can be had at short notice, half-bound in calf or morocco.

New Volumes of Standard Works in the various branches of Literature are constantly being added to this Series, which is already unsurpassed in respect to the number, variety, and cheapness of the Works contained in it. The Publishers have to announce the following Volumes as recently issued or now in preparation:—

Seneca’s Minor Works. Translated by Aubrey Stewart, M.A. [In the press.]

Elze’s Life of Shakespeare. Translated by L. Dora Schmitz. [See p. 4.]

Dunlop’s History of Fiction. With Introduction and Supplement, bringing the Work down to recent times. By Henry Wilson. [Immediately.]

Letters and Works of Lady Mary Wortley Montagu. [Ready, see p. 7.]

Heaton’s Concise History of Painting. [In the press.]

Lucian’s Dialogues of the Gods, the Sea Gods, and the Dead.

Strickland’s Lives of the Tudor and Stuart Princesses. [Ready, see p. 9.]

Mme. de Staël’s Corinne. [Immediately.]

Josephus’s Works. Edited by the Rev. A. R. Shilleto. [In the press.]

Johnson’s Lives of the Poets. [In the press.]

Schopenhauer’s The Fourfold Root and The Will in Nature. [In the press.]

June, 1888.

BOHN'S LIBRARIES.

STANDARD LIBRARY.

317 Vols. at 3s. 6d. each, excepting those marked otherwise. (56l. 1s. per set.)

ADDISON'S Works. Notes of Bishop Hurd. Short Memoir, Portrait, and 8 Plates of Medals. 6 vols. N. S.
This is the most complete edition of Addison's Works issued.

ALFIERI'S Tragedies. In English Verse. With Notes, Arguments, and Introduction, by E. A. Bowring, C.B. 2 vols. N. S.

AMERICAN POETRY.—See Poetry of America.

BACON'S Moral and Historical Works, including Essays, Apophthegms, Wisdom of the Ancients, New Atlantis, Henry VII., Henry VIII., Elizabeth, Henry Prince of Wales, History of Great Britain, Julius Caesar, and Augustus Caesar. With Critical and Biographical Introduction and Notes by J. Devey, M.A. Portrait. N. S.

— See also Philosophical Library.

BALLADS AND SONGS of the Peasantry of England, from Oral Recitation, private MSS., Broadsides, &c. Edit. by R. Bell. N. S.

BEAUMONT AND FLETCHER. Selections. With Notes and Introduction by Leigh Hunt.

BECKMANN (J.) History of Inventions, Discoveries, and Origins. With Portraits of Beckmann and James Watt. 2 vols. N. S.

BELL (Robert).—See Ballads, Chaucer, Green.

BOSWELL'S Life of Johnson, with the TOUR in the HEBRIDES and JOHNSONIANA. New Edition, with Notes and Appendices, by the Rev. A. Napier, M.A., Trinity College, Cambridge, Vicar of Holkham, Editor of the Cambridge Edition of the 'Theological Works of Barrow.' With Frontispiece to each vol. 6 vols. N.S.

BREMER'S (Frederika) Works. Trans. by M. Howitt. Portrait. 4 vols. N.S.

BRINK (B. T.) Early English Literature (to Wiclf). By Bernhard Ten Brink. Trans. by Prof. H. M. Kennedy. N. S.

BRITISH POETS, from Milton to Kirke White. Cabinet Edition. With Frontispiece. 4 vols. N. S.

BROWNE'S (Sir Thomas) Works. Edit. by S. Wilkin, with Dr. Johnson's Life of Browne. Portrait. 3 vols.

BURKE'S Works. 6 vols. N. S.

— **Speeches on the Impeachment** of Warren Hastings; and Letters. 2 vols. N. S.

— **Life.** By J. Prior. Portrait. N. S.

BURNS (Robert). Life of. By J. G. Lockhart, D.C.L. A new and enlarged edition. With Notes and Appendices by W. S. Douglas. Portrait. N. S.

BUTLER'S (Bp.) Analogy of Religion; Natural and Revealed, to the Constitution and Course of Nature; with Two Dissertations on Identity and Virtue, and Fifteen Sermons. With Introductions, Notes, and Memoir. Portrait. N. S.

CAMÖEN'S Lusiad, or the Discovery of India. An Epic Poem. Trans. from the Portuguese, with Dissertation, Historical Sketch, and Life, by W. J. Mickle. 5th edition. N. S.

CARAFAS (The) of Maddaloni. Naples under Spanish Dominion. Trans. by Alfred de Reumont. Portrait of Massaniello.

CARREL. The Counter-Revolution in England for the Re-establishment of Popery under Charles II. and James II., by Armand Carrel; with Fox's History of James II. and Lord Lonsdale's Memoir of James II. Portrait of Carrel.

CARRUTHERS.—See Pope, in Illustrated Library.

CARY'S Dante. The Vision of Hell, Purgatory, and Paradise. Trans. by Rev. H. F. Cary, M.A. With Life, Chronological View of his Age, Notes, and Index of Proper Names. Portrait. N.S.

This is the authentic edition, containing Mr. Cary's last corrections, with additional notes.

CELLINI (Benvenuto). Memoirs of, by himself. With Notes of G. P. Carpani. Trans. by T. Roscoe. Portrait. N.S.

CERVANTES' Galatea. A Pastoral Romance. Trans. by G. W. J. Gyll. N.S.

— **Exemplary Novels.** Trans. by W. K. Kelly. N.S.

— **Don Quixote de la Mancha.** Motteux's Translation revised. With Lockhart's Life and Notes. 2 vols. N.S.

CHAUCER'S Poetical Works. With Poems formerly attributed to him. With a Memoir, Introduction, Notes, and a Glossary, by R. Bell. Improved edition, with Preliminary Essay by Rev. W. W. Skeat, M.A. Portrait. 4 vols. N.S.

CLASSIC TALES, containing Rasselas, Vicar of Wakefield, Gulliver's Travels, and The Sentimental Journey. N.S.

COLERIDGE'S (S. T.) Friend. A Series of Essays on Morals, Politics, and Religion. Portrait. N.S.

— **Aids to Reflection.** Confessions of an Inquiring Spirit; and Essays on Faith and the Common Prayer-book. New Edition, revised. N.S.

— **Table-Talk and Omnia.** By T. Ashe, B.A. N.S.

— **Lectures on Shakspere** and other Poets. Edit. by T. Ashe, B.A. N.S. Containing the lectures taken down in 1811-12 by J. P. Collier, and those delivered at Bristol in 1813.

— **Biographia Literaria; or, Biographical Sketches of my Literary Life and Opinions;** with Two Lay Sermons. N.S.

— **Miscellanies, Ästhetic and Literary;** to which is added, THE THEORY OF LIFE Collected and arranged by T. Ashe, B.A. N.S.

COMMINES. — See Philip.

CONDÉ'S History of the Dominion of the Arabs in Spain. Trans. by Mrs. Foster. Portrait of Abderahmen ben Moavia. 3 vols.

COWPER'S Complete Works, Poems, Correspondence, and Translations. Edit. with Memoir by R. Southey. 45 Engravings. 8 vols.

COXE'S Memoirs of the Duke of Marlborough. With his original Correspondence, from family records at Blenheim. Revised edition. Portraits. 3 vols. ** An Atlas of the plans of Marlborough's campaigns, 4to. 10s. 6d.

— **History of the House of Austria.** From the Foundation of the Monarchy by Rhodolph of Hapsburgh to the Death of Leopold II., 1705-1709. By Archdn. Coxe. With Continuation from the Accession of Francis I. to the Revolution of 1848. 4 Portraits. 4 vols.

CUNNINGHAM'S Lives of the most Eminent British Painters. With Notes and 16 fresh Lives by Mrs. Heaton. 3 vols. N.S.

DEFOE'S Novels and Miscellaneous Works. With Prefaces and Notes, including those attributed to Sir W. Scott. Portrait. 7 vols. N.S.

DE LOLME'S Constitution of England, in which it is compared both with the Republican form of Government and the other Monarchies of Europe. Edit., with Life and Notes, by J. Macgregor, M.P.

DUNLOP'S History of Fiction. With Introduction and Supplement adapting the work to present requirements. By Henry Wilson. 3 vols. [In the press.]

ELZE'S Life of Shakespeare: Translated by L. Dora Schmitz. [In the press.]

EMERSON'S Works. 3 vols. Most complete edition published. N.S.

Vol. I.—Essays, Lectures, and Poems.

Vol. II.—English Traits, Nature, and Conduct of Life.

Vol. III.—Society and Solitude—Letters and Social Aims—Miscellaneous Papers (hitherto uncollected)—May-Day, &c.

FOSTER'S (John) Life and Correspondence. Edit. by J. E. Ryland. Portrait. 2 vols. N.S.

— **Lectures at Broadmead Chapel.** Edit. by J. E. Ryland. 2 vols. N.S.

— **Critical Essays contributed to the 'Eclectic Review.'** Edit. by J. E. Ryland. 2 vols. N.S.

— **Essays: On Decision of Character;** on a Man's writing Memoirs of Himself; on the epithet Romantic; on the aversion of Men of Taste to Evangelical Religion. N.S.

— **Essays on the Evils of Popular Ignorance, and a Discourse on the Propagation of Christianity in India.** N.S.

— **Essay on the Improvement of Time,** with Notes of Sermons and other Pieces. N.S.

— **Fosteriana:** selected from periodical papers, edit. by H. G. Bohn. N.S.

FOX (Rt. Hon. C. J.)—*See Carrel.*

GIBBON'S Decline and Fall of the Roman Empire. Complete and unabridged, with variorum Notes; including those of Guizot, Wenck, Niebuhr, Hugo, Neander, and others. 7 vols. 2 Maps and Portrait. N. S.

GOETHE'S Works. Trans. into English by E. A. Bowring, C.B., Anna Swanwick, Sir Walter Scott, &c. &c. 13 vols. N. S.

Vols. I. and II.—Autobiography and Annals. Portrait.

Vol. III.—Faust. Complete.

Vol. IV.—Novels and Tales: containing Elective Affinities, Sorrows of Werther, The German Emigrants, The Good Women, and a Nouvelle.

Vol. V.—Wilhelm Meister's Apprenticeship.

Vol. VI.—Conversations with Eckerman and Soret.

Vol. VII.—Poems and Ballads in the original Metres, including Hermann and Dorothea.

Vol. VIII.—Götz von Berlichingen, Torquato Tasso, Egmont, Iphigenia, Clavigo, Wayward Lover, and Fellow Culprits.

Vol. IX.—Wilhelm Meister's Travels. Complete Edition.

Vol. X.—Tour in Italy. Two Parts. And Second Residence in Rome.

Vol. XI.—Miscellaneous Travels, Letters from Switzerland, Campaign in France, Siege of Mainz, and Rhine Tour.

Vol. XII.—Early and Miscellaneous Letters, including Letters to his Mother, with Biography and Notes.

Vol. XIII.—Correspondence with Zelter.

— Correspondence with Schiller. 2 vols.—*See Schiller.*

GOLDSMITH'S Works. 5 vols. N.S. Vol. I.—Life, Vicar of Wakefield, Essays, and Letters.

Vol. II.—Poems, Plays, Bee, Cock Lane Ghost.

Vol. III.—The Citizen of the World, Polite Learning in Europe.

Vol. IV.—Biographies, Criticisms, Later Essays.

Vol. V.—Prefaces, Natural History, Letters, Goody Two-Shoes, Index.

GREENE, MARLOW, and BEN JONSON (Poems of). With Notes and Memoirs by R. Bell. N. S.

GREGORY'S (Dr.) The Evidences, Doctrines, and Duties of the Christian Religion.

GRIMM'S Household Tales. With the Original Notes. Trans. by Mrs. A. Hunt. Introduction by Andrew Lang, M.A. 2 vols. N. S.

GUIZOT'S History of Representative Government in Europe. Trans. by A. R. Scoble.

— **English Revolution of 1640.** From the Accession of Charles I. to his Death. Trans. by W. Hazlitt. Portrait.

— **History of Civilisation.** From the Roman Empire to the French Revolution. Trans. by W. Hazlitt. Portraits. 3 vols.

HALL'S (Rev. Robert) Works and Remains. Memoir by Dr. Gregory and Essay by J. Foster. Portrait.

HAUFF'S Tales. The Caravan—The Sheikh of Alexandria—The Inn in the Spessart. Translated by Prof. S. Mendel. N. S.

HAWTHORNE'S Tales. 3 vols. N. S.

Vol. I.—Twice-told Tales, and the Snow Image.

Vol. II.—Scarlet Letter, and the House with Seven Gables.

Vol. III.—Transformation, and Blithedale Romance.

HAZLITT'S (W.) Works. 7 vols. N. S.

— Table-Talk.

— **The Literature of the Age of Elizabeth** and Characters of Shakespeare's Plays. N. S.

— **English Poets and English Comic Writers.** N. S.

— **The Plain Speaker.** Opinions on Books, Men, and Things. N. S.

— **Round Table.** Conversations of James Northcote, R.A.; Characteristics. N. S.

— **Sketches and Essays,** and Winter-slow. N. S.

— **Spirit of the Age;** or, Contemporary Portraits. To which are added Free Thoughts on Public Affairs, and a Letter to William Gifford. New Edition by W. Carew Hazlitt. N. S.

HEINE'S Poems. Translated in the original Metres, with Life by E. A. Bowring, C.B. N. S.

— **Travel-Pictures.** The Tour in the Harz, Norderney, and Book of Ideas, together with the Romantic School. Trans. by F. Storr. With Maps and Appendices. N. S.

HOFFMANN'S Works. The Serapion Brethren. Vol. I. Trans. by Lt.-Col. Ewing. N. S. [Vol. II. in the press.]

HUGO'S (Victor) Dramatic Works. Hernani—Ruy Blas—The King's Diversion. Translated by Mrs. Newton Crosland and F. L. Slous. N. S.

— **Poems, chiefly Lyrical.** Collected by H. L. Williams. N. S.

This volume contains contributions from F. S. Mahoney, G. W. M. Reynolds, Andrew Lang, Edwin Arnold, Mrs. Newton Crosland, Miss Fanny Kemble, Bishop Alexander, Prof. Dowden, &c.

HUNGARY: its History and Revolution, with Memoir of Kossuth. Portrait.

HUTCHINSON (Colonel). Memoirs of. By his Widow, with her Autobiography, and the Siege of Lathom House. Portrait. N. S.

IRVING'S (Washington) Complete Works. 15 vols. N. S.

— **Life and Letters.** By his Nephew, Pierre E. Irving. With Index and a Portrait. 2 vols. N. S.

JAMES'S (G. P. R.) Life of Richard Cœur de Lion. Portraits of Richard and Philip Augustus. 2 vols.

— **Louis XIV.** Portraits. 2 vols.

JAMESON (Mrs.) Shakespeare's Heroines. Characteristics of Women. By Mrs. Jameson. N. S.

JEAN PAUL.—See Richter.

JONSON (Ben). Poems of.—See Greene.

JUNIUS'S Letters. With Woodfall's Notes. An Essay on the Authorship. Facsimiles of Handwriting. 2 vols. N. S.

LA FONTAINE'S Fables. In English Verse, with Essay on the Fabulists. By Elizur Wright. N. S.

LAMARTINE'S The Girondists, or Personal Memoirs of the Patriots of the French Revolution. Trans. by H. T. Ryde. Portraits of Robespierre, Madame Roland, and Charlotte Corday. 3 vols.

— **The Restoration of Monarchy in France (a Sequel to The Girondists).** 5 Portraits. 4 vols.

— **The French Revolution of 1848.** 6 Portraits.

LAMB'S (Charles) Elia and Eliana. Complete Edition. Portrait. N. S.

— **Specimens of English Dramatic Poets of the time of Elizabeth.** Notes, with the Extracts from the Garrick Plays. N. S.

— **Talfourd's Letters of Charles Lamb.** New Edition, by W. Carew Hazlitt. 2 vols. N. S.

LANZI'S History of Painting in Italy, from the Period of the Revival of the Fine Arts to the End of the 18th Century. With Memoir of the Author. Portraits of Raffaelle, Titian, and Correggio, after the Artists themselves. Trans. by T. Roscoe. 3 vols.

LAPPENBERG'S England under the Anglo-Saxon Kings. Trans. by B. Thorpe, F.S.A. 2 vols. N. S.

LESSING'S Dramatic Works. Complete. By E. Bell, M.A. With Memoir by H. Zimmern. Portrait. 2 vols. N. S.

— **Laokoon, Dramatic Notes, and Representation of Death by the Ancients.** Frontispiece. N. S.

LOCKE'S Philosophical Works, containing Human Understanding, with Bishop of Worcester, Malebranche's Opinions, Natural Philosophy, Reading and Study. With Preliminary Discourse, Analysis, and Notes, by J. A. St. John. Portrait. 2 vols. N. S.

— **Life and Letters,** with Extracts from his Common-place Books. By Lord King.

LOCKHART (J. G.)—See Burns.

LONSDALE (Lord).—See Carrel.

LUTHER'S Table-Talk. Trans. by W. Hazlitt. With Life by A. Chalmers, and LUTHER'S CATECHISM. Portrait after Cranach. N. S.

— **Autobiography.**—See Michelet.

MACHIAVELLI'S History of Florence, THE PRINCE, Savonarola, Historical Tracts, and Memoir. Portrait. N. S.

MARLOWE. Poems of.—See Greene.

MARTINEAU'S (Harriet) History of England (including History of the Peace) from 1800-1846. 5 vols. N. S.

MENZEL'S History of Germany, from the Earliest Period to the Crimean War. 3 Portraits. 3 vols.

MICHELET'S Autobiography of Luther. Trans. by W. Hazlitt. With Notes. N. S.

— **The French Revolution** to the Flight of the King in 1791. N. S.

MIGNET'S The French Revolution, from 1789 to 1814. Portrait of Napoleon. N. S.

MILTON'S Prose Works. With Preface, Preliminary Remarks by J. A. St. John, and Index. 5 vols.

MITFORD'S (Miss) Our Village. Sketches of Rural Character and Scenery. 2 Engravings. 2 vols. N. S.

MOLIÈRE'S Dramatic Works. In English Prose, by C. H. Wall. With a Life and a Portrait. 3 vols. N.S.

'It is not too much to say that we have here probably as good a translation of Molière as can be given.'—*Academy*.

MONTAGU. Letters and Works of Lady Mary Wortley Montagu. Lord Wharncliffe's Third Edition. Edited by W. Moy Thomas. With steel plates. 2 vols. 5s. each. N.S.

MONTESQUIEU'S Spirit of Laws. Revised Edition, with D'Alembert's Analysis, Notes, and Memoir. 2 vols. N.S.

NEANDER (Dr. A.) History of the Christian Religion and Church. Trans. by J. Torrey. With Short Memoir. 10 vols.

— Life of Jesus Christ, in its Historical Connexion and Development. N.S.

— The Planting and Training of the Christian Church by the Apostles. With the Antignosticus, or Spirit of Tertullian. Trans. by J. E. Ryland. 2 vols.

— Lectures on the History of Christian Dogmas. Trans. by J. E. Ryland. 2 vols.

— Memorials of Christian Life in the Early and Middle Ages; including Light in Dark Places. Trans. by J. E. Ryland.

OCKLEY (S.) History of the Saracens and their Conquests in Syria, Persia, and Egypt. Comprising the Lives of Mohammed and his Successors to the Death of Abdalmelik, the Eleventh Caliph. By Simon Ockley, B.D., Prof. of Arabic in Univ. of Cambridge. Portrait of Mohammed.

PERCY'S Reliques of Ancient English Poetry, consisting of Ballads, Songs, and other Pieces of our earlier Poets, with some few of later date. With Essay on Ancient Minstrels, and Glossary. 2 vols. N.S.

PHILIP DE COMMINES. Memoirs of. Containing the Histories of Louis XI. and Charles VIII., and Charles the Bold, Duke of Burgundy. With the History of Louis XI., by J. de Troyes. With a Life and Notes by A. R. Scoble. Portraits. 2 vols.

PLUTARCH'S LIVES. Newly Translated, with Notes and Life, by A Stewart, M.A., late Fellow of Trinity College, Cambridge, and G. Long, M.A. 4 vols. N.S.

POETRY OF AMERICA. Selections from One Hundred Poets, from 1776 to 1876. With Introductory Review, and Specimens of Negro Melody, by W. J. Linton. Portrait of W. Whitman. N.S.

RANKE (L.) History of the Popes, their Church and State, and their Conflicts with Protestantism in the 16th and 17th Centuries. Trans. by E. Foster. Portraits of Julius II. (after Raphael), Innocent X. (after Velasquez), and Clement VII. (after Titian). 3 vols. N.S.

— **History of Servia.** Trans. by Mrs. Kerr. To which is added, The Slave Provinces of Turkey, by Cyprien Robert. N.S.

— **History of the Latin and Teutonic Nations.** 1494–1514. Trans. by P. A. Ashworth, translator of Dr. Gneist's 'History of the English Constitution.' N.S.

REUMONT (Alfred de).—See *Carafas*.

REYNOLDS' (Sir J.) Literary Works. With Memoir and Remarks by H. W. Beechey. 2 vols. N.S.

RICHTER (Jean Paul). *Levana*, a Treatise on Education; together with the Autobiography, and a short Memoir. N.S.

— **Flower, Fruit, and Thorn Pieces,** or the Wedded Life, Death, and Marriage of Siebenkaes. Translated by Alex. Ewing. N.S.

The only complete English translation.

ROSCOE'S (W.) Life of Leo X., with Notes, Historical Documents, and Dissertation on Lucretia Borgia. 3 Portraits. 2 vols.

— **Lorenzo de' Medici,** called 'The Magnificent,' with Copyright Notes, Poems, Letters, &c. With Memoir of Roscoe and Portrait of Lorenzo.

RUSSIA, History of, from the earliest Period to the Crimean War. By W. K. Kelly. 3 Portraits. 2 vols.

SCHILLER'S Works. 6 vols. N.S.

Vol. I.—Thirty Years' War—Revolt in the Netherlands. Rev A. J. W. Morrison, M.A. Portrait.

Vol. II.—Revolt in the Netherlands, completed—Wallenstein. By J. Churchill and S. T. Coleridge.—William Tell. Sir Theodore Martin. Engraving (after Vandyck).

Vol. III.—Don Carlos. R. D. Boylan—Mary Stuart. Mellish—Maid of Orleans. Anna Swanwick—Bride of Messina. A. Lodge, M.A. Together with the Use of the Chorus in Tragedy (a short Essay). Engravings.

These Dramas are all translated in metre.

Vol. IV.—Robbers—Fiesco—Love and Intrigue—Demetrius—Ghost Seer—Sport of Divinity.

The Dramas in this volume are in prose.

Vol. V.—Poems. E. A. Bowring, C.B.

Vol. VI.—Essays, Ästhetical and Philosophical, including the Dissertation on the Connexion between the Animal and Spiritual in Man.

SCHILLER and GOETHE. Correspondence between, from A.D. 1794-1805. With Short Notes by L. Dora Schmitz. 2 vols. N. S.

SCHLEGEL'S (F.) Lectures on the Philosophy of Life and the Philosophy of Language. By A. J. W. Morrison.

— **The History of Literature, Ancient and Modern.**

— **The Philosophy of History.** With Memoir and Portrait.

— **Modern History,** with the Lectures entitled Caesar and Alexander, and The Beginning of our History. By L. Purcel and R. H. Whitelock.

— **Aesthetic and Miscellaneous Works,** containing Letters on Christian Art, Essay on Gothic Architecture, Remarks on the Romance Poetry of the Middle Ages, on Shakspeare, the Limits of the Beautiful, and on the Language and Wisdom of the Indians. By E. J. Millington.

SCHLEGEL (A. W.) Dramatic Art and Literature. By J. Black. With Memoir by A. J. W. Morrison. Portrait.

SCHUMANN (Robert), His Life and Works. By A. Reissmann. Trans. by A. L. Alger. N. S.

SHAKESPEARE'S Dramatic Art. The History and Character of Shakspeare's Plays. By Dr. H. Ulrici. Trans. by L. Dora Schmitz. 2 vols. N. S.

SHERIDAN'S Dramatic Works. With Memoir. Portrait (after Reynolds). N. S.

SKEAT (Rev. W. W.)—See Chaucer.

SISMONDI'S History of the Literature of the South of Europe. With Notes and Memoir by T. Roscoe. Portraits of Sismondi and Dante. 2 vols.

The specimens of early French, Italian, Spanish, and Portugese Poetry, in English Verse, by Cary and others.

SMITH'S (Adam) The Wealth of Nations. An Inquiry into the Nature and Causes of. Reprinted from the Sixth Edition. With an Introduction by Ernest Belfort Bax. 2 vols. N. S.

SMITH'S (Adam) Theory of Moral Sentiments; with Essay on the First Formation of Languages, and Critical Memoir by Dugald Stewart.

SMYTH'S (Professor) Lectures on Modern History; from the Irruption of the Northern Nations to the close of the American Revolution. 2 vols.

— **Lectures on the French Revolution.** With Index. 2 vols.

SOUTHEY.—See Cowper, Wesley, and (Illustrated Library) Nelson.

STURM'S Morning Communings with God, or Devotional Meditations for Every Day. Trans. by W. Johnstone, M.A.

SULLY. Memoirs of the Duke of, Prime Minister to Henry the Great. With Notes and Historical Introduction. 4 Portraits. 4 vols.

TAYLOR'S (Bishop Jeremy) Holy Living and Dying, with Prayers, containing the Whole Duty of a Christian and the parts of Devotion fitted to all Occasions. Portrait. N. S.

THIERRY'S Conquest of England by the Normans; its Causes, and its Consequences in England and the Continent. By W. Hazlitt. With short Memoir. 2 Portraits. 2 vols. N. S.

TROYE'S (Jean de).—See Philip de Commines.

ULRICI (Dr.)—See Shakespeare.

VASARI. Lives of the most Eminent Painters, Sculptors, and Architects. By Mrs. J. Foster, with selected Notes. Portrait. 6 vols., Vol. VI. being an additional Volume of Notes by J. P. Richter. N. S.

WERNER'S Templars in Cyprus. Trans. by E. A. M. Lewis. N. S.

WESLEY, the Life of, and the Rise and Progress of Methodism. By Robert Southey. Portrait. 5s. N. S.

WHEATLEY. A Rational Illustration of the Book of Common Prayer, being the Substance of everything Liturgical in all former Ritualist Commentators upon the subject. Frontispiece. N. S.

HISTORICAL LIBRARY.

22 Volumes at 5s. each. (5l. 10s. per set.)

EVELYN'S Diary and Correspondence, with the Private Correspondence of Charles I. and Sir Edward Nicholas, and between Sir Edward Hyde (Earl of Clarendon) and Sir Richard Browne. Edited from the Original MSS. by W. Bray, F.A.S. 4 vols. N. S. 45 Engravings (after Vandyke, Lely, Kneller, and Jamieson, &c.).

N.B.—This edition contains 130 letters from Evelyn and his wife, contained in no other edition.

PEPYS' Diary and Correspondence. With Life and Notes, by Lord Braybrooke. 4 vols. N. S. With Appendix containing additional Letters, an Index, and 31 Engravings (after Vandyke, Sir P. Lely, Holbein, Kneller, &c.).

JESSE'S Memoirs of the Court of England under the Stuarts, including the Protectorate. 3 vols. With Index and 42 Portraits (after Vandyke, Lely, &c.).

— **Memoirs of the Pretenders and their Adherents**. 7 Portraits.

NUGENT'S (Lord) Memorials of Hampden, his Party and Times. With Memoir. 12 Portraits (after Vandyke and others). N. S.

STRICKLAND'S (Agnes) Lives of the Queens of England from the Norman Conquest. From authentic Documents, public and private. 6 Portraits. 6 vols. N. S.

— **Life of Mary Queen of Scots**. 2 Portraits. 2 vols. N. S.

— **Lives of the Tudor and Stuart Princesses**. With 2 Portraits. N. S.

PHILOSOPHICAL LIBRARY.

16 Vols. at 5s. each, excepting those marked otherwise. (3l. 14s. per set.)

BACON'S Novum Organum and Advancement of Learning. With Notes by J. Devey, M.A.

BAX. A Handbook of the History of Philosophy, for the use of Students. By E. Belfort Bax, Editor of Kant's 'Prolegomena.' 5s. N. S.

COMTE'S Philosophy of the Sciences. An Exposition of the Principles of the *Cours de Philosophie Positive*. By G. H. Lewes, Author of 'The Life of Goethe.'

DRAPER (Dr. J. W.) A History of the Intellectual Development of Europe. 2 vols. N. S.

HEGEL'S Philosophy of History. By J. Sibree, M.A.

KANT'S Critique of Pure Reason. By J. M. D. Meiklejohn. N. S.

— **Prolegomena and Metaphysical Foundations of Natural Science**, with Biography and Memoir by E. Belfort Bax. Portrait. N. S.

LOGIC, or the Science of Inference. A Popular Manual. By J. Devey.

MILLER (Professor) History Philosophically Illustrated, from the Fall of the Roman Empire to the French Revolution. With Memoir. 4 vols. 3s. 6d. each.

SPINOZA'S Chief Works. Trans. with Introduction by R. H. M. Elwes. 2 vols. N.S.

Vol. I.—Tractatus Theologico-Politicus—Political Treatise.

Vol. II.—Improvement of the Understanding—Ethics—Letters.

TENNEMANN'S Manual of the History of Philosophy. Trans. by Rev. A. Johnson, M.A.

THEOLOGICAL LIBRARY.

15 Vols. at 5s. each, excepting those marked otherwise. (3l. 13s. 6d. per set.)

BLEEK. *Introduction to the Old Testament.* By Friedrich Bleek. Trans. under the supervision of Rev. E. Venables, Residentiary Canon of Lincoln. 2 vols. N.S.

CHILLINGWORTH'S *Religion of Protestants.* 3s. 6d.

EUSEBIUS. *Ecclesiastical History* of Eusebius Pamphilus, Bishop of Cæsarea. Trans. by Rev. C. F. Cruse, M.A. With Notes, Life, and Chronological Tables.

EVAGRIUS. *History of the Church.* —See *Theodoret.*

HARDWICK. *History of the Articles of Religion;* to which is added a Series of Documents from A.D. 1536 to A.D. 1615. Ed. by Rev. F. Proctor. N.S.

HENRY'S (Matthew) Exposition of the Book of Psalms. Numerous Woodcuts.

PEARSON (John, D.D.) Exposition of the Creed. Edit. by E. Walford, M.A. With Notes, Analysis, and Indexes. N.S.

PHILO-JUDÆUS, *Works of.* The Contemporary of Josephus. Trans. by C. D. Yonge. 4 vols.

PHILOSTORGIIUS. *Ecclesiastical History of.* —See *Sozomen.*

SOCRATES' Ecclesiastical History. Comprising a History of the Church from Constantine, A.D. 305; to the 38th year of Theodosius II. With Short Account of the Author, and selected Notes.

SOZOMEN'S Ecclesiastical History. A.D. 324-440. With Notes, Prefatory Remarks by Valesius, and Short Memoir. Together with the *ECCLESIASTICAL HISTORY OF PHILOSTORGIIUS*, as epitomised by Photius. Trans. by Rev. E. Walford, M.A. With Notes and brief Life.

THEODORET and EVAGRIUS. Histories of the Church from A.D. 332 to the Death of Theodore of Mopsuestia, A.D. 427; and from A.D. 431 to A.D. 544. With Memoirs.

WIESELER'S (Karl) Chronological Synopsis of the Four Gospels. Trans. by Rev. Canon Venables. N.S.

ANTIQUARIAN LIBRARY.

35 Vols. at 5s. each. (8l. 15s. per set.)

ANGLO-SAXON CHRONICLE. —See *Bede.*

ASSER'S Life of Alfred. —See *Six O. E. Chronicles.*

BEDE'S (Venerable) Ecclesiastical History of England. Together with the *ANGLO-SAXON CHRONICLE*. With Notes, Short Life, Analysis, and Map. Edit. by J. A. Giles, D.C.L.

BOETHIUS'S Consolation of Philosophy. King Alfred's Anglo-Saxon Version of. With an English Translation on opposite pages, Notes, Introduction, and Glossary, by Rev. S. Fox, M.A. To which is added the Anglo-Saxon Version of the METRES OF BOETHIUS, with a free Translation by Martin F. Tupper, D.C.L.

BRAND'S Popular Antiquities of England, Scotland, and Ireland. Illustrating the Origin of our Vulgar and Provincial Customs, Ceremonies, and Superstitions. By Sir Henry Ellis, K.H., F.R.S. Frontispiece. 3 vols.

CHRONICLES of the CRUSADES. Contemporary Narratives of Richard Coeur de Lion, by Richard of Devizes and Geoffrey de Vinsauf; and of the Crusade at Saint Louis, by Lord John de Joinville. With Short Notes. Illuminated Frontispiece from an old MS.

DYER'S (T. F. T.) British Popular Customs, Present and Past. An Account of the various Games and Customs associated with different Days of the Year in the British Isles, arranged according to the Calendar. By the Rev. T. F. Thiselton Dyer, M.A.

EARLY TRAVELS IN PALESTINE. Comprising the Narratives of Arculf, Willibald, Bernard, Sæwulf, Sigurd, Benjamin of Tudela, Sir John Maundeville, De la Brocquière, and Maundrell; all unabridged. With Introduction and Notes by Thomas Wright. Map of Jerusalem.

ELLIS (G.) Specimens of Early English Metrical Romances, relating to Arthur, Merlin, Guy of Warwick, Richard Cœur de Lion, Charlemagne, Roland, &c. &c. With Historical Introduction by J. O. Halliwell, F.R.S. Illuminated Frontispiece from an old MS.

ETHELWERD. Chronicle of.—See *Six O. E. Chronicles.*

FLORENCE OF WORCESTER'S Chronicle, with the Two Continuations: comprising Annals of English History from the Departure of the Romans to the Reign of Edward I. Trans., with Notes, by Thomas Forester, M.A.

GEOFFREY OF MONMOUTH. Chronicle of.—See *Six O. E. Chronicles.*

GESTA ROMANORUM, or Entertaining Moral Stories invented by the Monks. Trans., with Notes by the Rev. Charles Swan. Edit. by W. Hooper, M.A.

GILDAS. Chronicle of.—See *Six O. E. Chronicles.*

GIRALDUS CAMBRENSIS' Historical Works. Containing Topography of Ireland, and History of the Conquest of Ireland, by Th. Forester, M.A. Itinerary through Wales, and Description of Wales, by Sir R. Colt Hoare.

HENRY OF HUNTINGDON'S History of the English, from the Roman Invasion to the Accession of Henry II.; with the Acts of King Stephen, and the Letter to Walter. By T. Forester, M.A. Frontispiece from an old MS.

INGULPH'S Chronicles of the Abbey of Croyland, with the CONTINUATION by Peter of Blois and others. Trans. with Notes by H. T. Riley, B.A.

KEIGHTLEY'S (Thomas) Fairy Mythology, illustrative of the Romance and Superstition of Various Countries. Frontispiece by Cruikshank. N. S.

LEPSIUS'S Letters from Egypt, Ethiopia, and the Peninsula of Sinai; to which are added, Extracts from his Chronology of the Egyptians, with reference to the Exodus of the Israelites. By L. and J. B. Horner. Maps and Coloured View of Mount Barkal.

MALLET'S Northern Antiquities, or an Historical Account of the Manners, Customs, Religions, and Literature of the Ancient Scandinavians. Trans. by Bishop Percy. With Translation of the PROSE EDDA, and Notes by J. A. Blackwell. Also an Abstract of the 'Eyrbyggia Saga' by Sir Walter Scott. With Glossary and Coloured Frontispiece.

MARCO POLO'S Travels; with Notes and Introduction. Edit. by T. Wright.

MATTHEW PARIS'S English History, from 1235 to 1273. By Rev. J. A. Giles, D.C.L. With Frontispiece. 3 vols.—*See also Roger of Wendover.*

MATTHEW OF WESTMINSTER'S Flowers of History, especially such as relate to the affairs of Britain, from the beginning of the World to A.D. 1307. By C. D. Yonge. 2 vols.

NENNIIUS. Chronicle of.—See *Six O. E. Chronicles.*

ORDERICUS VITALIS' Ecclesiastical History of England and Normandy. With Notes, Introduction of Guizot, and the Critical Notice of M. Delille, by T. Forester, M.A. To which is added the CHRONICLE of St. EVROULT. With General and Chronological Indexes. 4 vols.

PAULI'S (Dr. R.) Life of Alfred the Great. To which is appended Alfred's ANGLO-SAXON VERSION of OROSUS. With literal Translation interpaged, Notes, and an ANGLO-SAXON GRAMMAR and Glossary, by B. Thorpe, Esq. Frontispiece.

RICHARD OF CIRENCESTER. Chronicle of.—See *Six O. E. Chronicles.*

ROGER DE HOVEDEN'S Annals of English History, comprising the History of England and of other Countries of Europe from A.D. 732 to A.D. 1201. With Notes by H. T. Riley, B.A. 2 vols.

ROGER OF WENDOVER'S Flowers of History, comprising the History of England from the Descent of the Saxons to A.D. 1235, formerly ascribed to Matthew Paris. With Notes and Index by J. A. Giles, D.C.L. 2 vols.

SIX OLD ENGLISH CHRONICLES: viz., Asser's Life of Alfred and the Chronicles of Ethelwerd, Gildas, Nennius, Geoffrey of Monmouth, and Richard of Cirencester. Edit., with Notes, by J. A. Giles, D.C.L. Portrait of Alfred.

WILLIAM OF MALMESBURY'S Chronicle of the Kings of England, from the Earliest Period to King Stephen. By Rev. J. Sharpe. With Notes by J. A. Giles, D.C.L. Frontispiece.

YULE-TIDE STORIES. A Collection of Scandinavian and North-German Popular Tales and Traditions, from the Swedish, Danish, and German. Edit. by B. Thorpe.

ILLUSTRATED LIBRARY.

86 Vols. at 5s. each, excepting those marked otherwise. (23l. 4s. per set.)

ALLEN'S (Joseph, R.N.) *Battles of the British Navy.* Revised edition, with Indexes of Names and Events, and 57 Portraits and Plans. 2 vols.

ANDERSEN'S *Danish Fairy Tales.* By Caroline Peachey. With Short Life and 120 Wood Engravings.

ARIOSTO'S *Orlando Furioso.* In English Verse by W. S. Rose. With Notes and Short Memoir. Portrait after Titian, and 24 Steel Engravings. 2 vols.

BECHSTEIN'S *Cage and Chamber Birds: their Natural History, Habits, &c.* Together with SWEET'S *BRITISH WARBLERS.* 43 Plates and Woodcuts. N. S.

— or with the Plates Coloured, 7s. 6d.

BONOMI'S *Nineveh and its Palaces.* The Discoveries of Botta and Layard applied to the Elucidation of Holy Writ. 7 Plates and 294 Woodcuts. N. S.

BUTLER'S *Hudibras,* with Variorum Notes and Biography. Portrait and 28 Illustrations.

CATTERMOLE'S *Evenings at Haddon Hall.* Romantic Tales of the Olden Times. With 24 Steel Engravings after Cattermole.

CHINA, Pictorial, Descriptive, and Historical, with some account of Ava and the Burmese, Siam, and Anam. Map, and nearly 100 Illustrations.

CRAIK'S (G. L.) *Pursuit of Knowledge under Difficulties.* Illustrated by Anecdotes and Memoirs. Numerous Woodcut Portraits. N. S.

CRUIKSHANK'S *Three Courses and a Dessert;* comprising three Sets of Tales, West Country, Irish, and Legal; and a Mélange. With 50 Illustrations by Cruikshank. N. S.

— *Punch and Judy.* The Dialogue of the Puppet Show; an Account of its Origin, &c. 24 Illustrations by Cruikshank. N. S.

— With Coloured Plates. 7s. 6d.

DIDRON'S *Christian Iconography;* a History of Christian Art in the Middle Ages. By the late A. N. Didron. Trans. by E. J. Millington, and completed, with Additions and Appendices, by Margaret Stokes. 2 vols. With numerous Illustrations.

Vol. I. The History of the Nimbus, the Aureole, and the Glory; Representations of the Persons of the Trinity.

Vol. II. The Trinity; Angels; Devils; The Soul; The Christian Scheme. Appendices.

DANTE, in English Verse, by I. C. Wright, M.A. With Introduction and Memoir. Portrait and 34 Steel Engravings after Flaxman. N. S.

DYER (Dr. T. H.) *Pompeii: its Buildings and Antiquities.* An Account of the City, with full Description of the Remains and Recent Excavations, and an Itinerary for Visitors. By T. H. Dyer, LL.D. Nearly 300 Wood Engravings, Map, and Plan. 7s. 6d. N. S.

— *Rome:* History of the City, with Introduction on recent Excavations. 8 Engravings, Frontispiece, and 2 Maps.

GIL BLAS. *The Adventures of From the French of Lesage by Smollett.* 24 Engravings after Smirke, and 10 Etchings by Cruikshank. 612 pages. 6s.

GRIMM'S *Gammer Grethel;* or, German Fairy Tales and Popular Stories, containing 42 Fairy Tales. By Edgar Taylor. Numerous Woodcuts after Cruikshank and Ludwig Grimm. 3s. 6d.

HOLBEIN'S *Dance of Death and Bible Cuts.* Upwards of 150 Subjects, engraved in facsimile, with Introduction and Descriptions by the late Francis Douce and Dr. Dibdin. 7s. 6d.

HOWITT'S (Mary) *Pictorial Calendar of the Seasons;* embodying AIKIN'S CALENDAR OF NATURE. Upwards of 100 Woodcuts.

INDIA, Pictorial, Descriptive, and Historical, from the Earliest Times. 100 Engravings on Wood and Map.

JESSE'S *Anecdotes of Dogs.* With 40 Woodcuts after Harvey, Bewick, and others. N. S.

— With 34 additional Steel Engravings after Cooper, Landseer, &c. 7s. 6d. N. S.

KING'S (C. W.) *Natural History of Gems or Decorative Stones.* Illustrations. 6s.

— *Natural History of Precious Stones and Metals.* Illustrations. 6s.

KITTO'S *Scripture Lands.* Described in a series of Historical, Geographical, and Topographical Sketches. 42 Maps.

— With the Maps coloured, 7s. 6d.

KRUMMACHER'S *Parables.* 40 Illustrations.

LINDSAY'S (Lord) *Letters on Egypt, Edom, and the Holy Land.* 36 Wood Engravings and 2 Maps.

LODGE'S Portraits of Illustrious Personages of Great Britain, with Biographical and Historical Memoirs. 240 Portraits engraved on Steel, with the respective Biographies unabridged. Complete in 8 vols.

LONGFELLOW'S Poetical Works, including his Translations and Notes. 24 full-page Woodcuts by Birket Foster and others, and a Portrait. N.S.

— Without the Illustrations, 3s. 6d. N.S.

— **Prose Works**. With 16 full-page Woodcuts by Birket Foster and others.

LOUDON'S (Mrs.) Entertaining Naturalist. Popular Descriptions, Tales, and Anecdotes, of more than 500 Animals. Numerous Woodcuts. N.S.

MARRYAT'S (Capt., R.N.) Master-man Ready; or, the Wreck of the *Pacific*. (Written for Young People.) With 93 Woodcuts. 3s. 6d. N.S.

— **Mission; or, Scenes in Africa**. (Written for Young People.) Illustrated by Gilbert and Dalziel. 3s. 6d. N.S.

— **Pirate and Three Cutters**. (Written for Young People.) With a Memoir. 8 Steel Engravings after Clarkson Stanfield, R.A. 3s. 6d. N.S.

— **Privateersman**. Adventures by Sea and Land One Hundred Years Ago. (Written for Young People.) 8 Steel Engravings. 3s. 6d. N.S.

— **Settlers in Canada**. (Written for Young People.) 10 Engravings by Gilbert and Dalziel. 3s. 6d. N.S.

— **Poor Jack**. (Written for Young People.) With 16 Illustrations after Clarkson Stanfield, R.A. 3s. 6d. N.S.

MAXWELL'S Victories of Wellington and the British Armies. Frontispiece and 4 Portraits.

MICHAEL ANGELO and RAPHAEL, Their Lives and Works. By Dupper and Quatremère de Quincy. Portraits and Engravings, including the Last Judgment, and Cartoons. N.S.

MILLER'S History of the Anglo-Saxons, from the Earliest Period to the Norman Conquest. Portrait of Alfred, Map of Saxon Britain, and 12 Steel Engravings.

MILTON'S Poetical Works, with a Memoir and Notes by J. Montgomery, an Index to Paradise Lost, Todd's Verbal Index to all the Poems, and Notes. 120 Wood Engravings. 2 vols. N.S.

MUDIE'S History of British Birds. Revised by W.C.L. Martin. 52 Figures of Birds and 7 Plates of Eggs. 2 vols. N.S.

— With the Plates coloured, 7s. 6d. per vol.

NAVAL and MILITARY HEROES of Great Britain; a Record of British Valour on every Day in the year, from William the Conqueror to the Battle of Inkermann. By Major Johns, R.M., and Lieut. P. H. Nicolas, R.M. Indexes. 24 Portraits after Holbein, Reynolds, &c. 6s.

NICOLINI'S History of the Jesuits: their Origin, Progress, Doctrines, and Designs. 8 Portraits.

PETRARCH'S Sonnets, Triumphs, and other Poems, in English Verse. With Life by Thomas Campbell. Portrait and 15 Steel Engravings.

PICKERING'S History of the Races of Man, and their Geographical Distribution; with AN ANALYTICAL SYNOPSIS OF THE NATURAL HISTORY OF MAN. By Dr. Hall. Map of the World and 12 Plates.

— With the Plates coloured, 7s. 6d.

PICTORIAL HANDBOOK OF Modern Geography on a Popular Plan. Compiled from the best Authorities, English and Foreign, by H. G. Bohn. 150 Woodcuts and 51 Maps. 6s.

— With the Maps coloured, 7s. 6d.

— Without the Maps, 3s. 6d.

POPE'S Poetical Works, including Translations. Edit., with Notes, by R. Carruthers. 2 vols.

— **Homer's Iliad**, with Introduction and Notes by Rev. J. S. Watson, M.A. With Flaxman's Designs. N.S.

— **Homer's Odyssey**, with the BATTLE OF FROGS AND MICE, Hymns, &c., by other translators, including Chapman. Introduction and Notes by J. S. Watson, M.A. With Flaxman's Designs. N.S.

— **Life**, including many of his Letters. By R. Carruthers. Numerous Illustrations.

POTTERY AND PORCELAIN, and other objects of Vertu. Comprising an Illustrated Catalogue of the Bernal Collection, with the prices and names of the Possessors. Also an Introductory Lecture on Pottery and Porcelain, and an Engraved List of all Marks and Monograms. By H. G. Bohn. Numerous Woodcuts.

— With coloured Illustrations, 10s. 6d.

PROUT'S (Father) Reliques. Edited by Rev. F. Mahony. Copyright edition, with the Author's last corrections and additions. 21 Etchings by D. Macleise, R.A. Nearly 600 pages. 5s. N.S.

RECREATIONS IN SHOOTING. With some Account of the Game found in the British Isles, and Directions for the Management of Dog and Gun. By 'Craven.' 62 Woodcuts and 9 Steel Engravings after A. Cooper, R.A.

REDDING'S History and Descriptions of Wines, Ancient and Modern. 20 Woodcuts.

RENNIE. Insect Architecture. Revised by Rev. J. G. Wood, M.A. 186 Woodcuts. N. S.

ROBINSON CRUSOE. With Memoir of Defoe, 12 Steel Engravings and 74 Woodcuts after Stothard and Harvey.

— Without the Engravings, 3s. 6d.

ROME IN THE NINETEENTH CENTURY. An Account in 1817 of the Ruins of the Ancient City, and Monuments of Modern Times. By C. A. Eaton. 34 Steel Engravings. 2 vols.

SHARPE (S.) The History of Egypt, from the Earliest Times till the Conquest by the Arabs, A.D. 640. 2 Maps and upwards of 400 Woodcuts. 2 vols. N. S.

SOUTHEY'S Life of Nelson. With Additional Notes, Facsimiles of Nelson's Writing, Portraits, Plans, and 50 Engravings, after Birket Foster, &c. N. S.

STARLING'S (Miss) Noble Deeds of Women; or, Examples of Female Courage, Fortitude, and Virtue. With 14 Steel Portraits. N. S.

STUART and REVETT'S Antiquities of Athens, and other Monuments of Greece; with Glossary of Terms used in Grecian Architecture. 71 Steel Plates and numerous Woodcuts.

SWEET'S British Warblers. 5s.—See Bechstein.

TALES OF THE GENII; or, the Delightful Lessons of Horam, the Son of Asmar. Trans. by Sir C. Morrell. Numerous Woodcuts.

TASSO'S Jerusalem Delivered. In English Spenserian Verse, with Life, by J. H. Wiffen. With 8 Engravings and 24 Woodcuts. N. S.

WALKER'S Manly Exercises; containing Skating, Riding, Driving, Hunting, Shooting, Sailing, Rowing, Swimming, &c. 44 Engravings and numerous Woodcuts.

WALTON'S Complete Angler, or the Contemplative Man's Recreation, by Izaak Walton and Charles Cotton. With Memoirs and Notes by E. Jesse. Also an Account of Fishing Stations, Tackle, &c., by H. G. Bohn. Portrait and 203 Woodcuts. N. S.

— With 26 additional Engravings on Steel, 7s. 6d.

Lives of Donne, Wotton, Hooker, &c., with Notes. A New Edition, revised by A. H. Bullen, with a Memoir of Izaak Walton by William Dowling. 6 Portraits, 6 Autograph Signatures, &c. N. S.

WELLINGTON, Life of. From the Materials of Maxwell. 18 Steel Engravings.

— Victories of.—See Maxwell.

WESTROPP (H. M.) A Handbook of Archæology, Egyptian, Greek, Etruscan, Roman. By H. M. Westropp. Numerous Illustrations. 7s. 6d. N. S.

WHITE'S Natural History of Selborne, with Observations on various Parts of Nature, and the Naturalists' Calendar. Sir W. Jardine. Edit., with Notes and Memoir, by E. Jesse. 40 Portraits. N. S.

— With the Plates coloured, 7s. 6d. N. S.

YOUNG LADY'S BOOK, The. A Manual of Recreations, Arts, Sciences, and Accomplishments. 1200 Woodcut Illustrations. 7s. 6d.

— cloth gilt, gilt edges, 9s.

CLASSICAL LIBRARY.

TRANSLATIONS FROM THE GREEK AND LATIN.

100 Vols. at 5s. each, excepting those marked otherwise. (24l. 10s. 6d. per set.)

ÆSCHYLUS, The Dramas of. In English Verse by Anna Swanwick. 4th edition. N. S.

— **The Tragedies of.** In Prose, with Notes and Introduction, by T. A. Buckley, B.A. Portrait. 3s. 6d.

AMMIANUS MARCELLINUS. History of Rome during the Reigns of Constantius, Julian, Jovianus, Valentinian, and Valens, by C. D. Yonge, B.A. Double volume. 7s. 6d.

ANTONINUS (M. Aurelius), The Thoughts of. Translated literally, with Notes, Biographical Sketch, and Essay on the Philosophy, by George Long, M.A. 3s. 6d. N. S.

APULEIUS, The Works of. Comprising the Golden Ass, God of Socrates, Florida, and Discourse of Magic. With a Metrical Version of Cupid and Psyche, and Mrs. Tighe's Psyche. Frontispiece.

ARISTOPHANES' Comedies. Trans., with Notes and Extracts from Frere's and other Metrical Versions, by W. J. Hickie. Portrait. 2 vols.

ARISTOTLE'S Nicomachean Ethics. Trans., with Notes, Analytical Introduction, and Questions for Students, by Ven. Archdn. Browne.

— **Politics and Economics.** Trans., with Notes, Analyses, and Index, by E. Walford, M.A., and an Essay and Life by Dr. Gillies.

— **Metaphysics.** Trans., with Notes, Analysis, and Examination Questions, by Rev. John H. M'Mahon, M.A.

— **History of Animals.** In Ten Books. Trans., with Notes and Index, by R. Cresswell, M.A.

— **Organon;** or, Logical Treatises, and the Introduction of Porphyry. With Notes, Analysis, and Introduction, by Rev. O. F. Owen, M.A. 2 vols. 3s. 6d. each.

— **Rhetoric and Poetics.** Trans., with Hobbes' Analysis, Exam. Questions, and Notes, by T. Buckley, B.A. Portrait.

ATHENÆUS. The Deipnosophists; or, the Banquet of the Learned. By C. D. Yonge, B.A. With an Appendix of Poetical Fragments. 3 vols.

ATLAS of Classical Geography. 22 large Coloured Maps. With a complete Index. Imp. 8vo. 7s. 6d.

BION. — See *Theocritus*.

CÆSAR. Commentaries on the Gallic and Civil Wars, with the Supplementary Books attributed to Hirtius, including the complete Alexandrian, African, and Spanish Wars. Trans. with Notes. Portrait.

CATULLUS, Tibullus, and the Vigil of Venus. Trans. with Notes and Biographical Introduction. To which are added, Metrical Versions by Lamb, Grainger, and others. Frontispiece.

CICERO'S Orations. Trans. by C. D. Yonge, B.A. 4 vols.

— **On Oratory and Orators.** With Letters to Quintus and Brutus. Trans., with Notes, by Rev. J. S. Watson, M.A.

— **On the Nature of the Gods,** Divination, Fate, Laws, a Republic, Consulship. Trans., with Notes, by C. D. Yonge, B.A.

— **Academics,** De Finibus, and Tusculan Questions. By C. D. Yonge, B.A. With Sketch of the Greek Philosophers mentioned by Cicero.

CICERO'S Orations.—Continued.

— **Offices;** or, Moral Duties. Cato Major, an Essay on Old Age; Lælius, an Essay on Friendship; Scipio's Dream; Paradoxes; Letter to Quintus on Magistrates. Trans., with Notes, by C. R. Edmonds. Portrait. 3s. 6d.

DEMOSTHENES' Orations. Trans., with Notes, Arguments, a Chronological Abstract, and Appendices, by C. Rann Kennedy. 5 vols.

DICTIONARY of LATIN and GREEK Quotations; including Proverbs, Maxims, Mottoes, Law Terms and Phrases. With the Quantities marked, and English Translations.

— With Index Verborum (622 pages). 6s.

— Index Verborum to the above, with the Quantities and Accents marked (56 pages), limp cloth. 1s.

DIOGENES LAERTIUS. Lives and Opinions of the Ancient Philosophers. Trans., with Notes, by C. D. Yonge, B.A.

EPICTETUS. The Discourses of. With the Encheiridion and Fragments. With Notes, Life, and View of his Philosophy, by George Long, M.A. N.S.

EURIPIDES. Trans., with Notes and Introduction, by T. A. Buckley, B.A. Portrait. 2 vols.

GREEK ANTHOLOGY. In English Prose by G. Burges, M.A. With Metrical Versions by Bland, Merivale, Lord Denman, &c.

GREEK ROMANCES of Heliodorus, Longus, and Achilles Tatius; viz., The Adventures of Theagenes and Chariclea; Amours of Daphnis and Chloe; and Loves of Clitopho and Leucippe. Trans., with Notes, by Rev. R. Smith, M.A.

HERODOTUS. Literally trans. by Rev. Henry Cary, M.A. Portrait.

HESIOD, CALLIMACHUS, and Theognis. In Prose, with Notes and Biographical Notices by Rev. J. Banks, M.A. Together with the Metrical Versions of Hesiod, by Elton; Callimachus, by Tytler; and Theognis, by Frere.

HOMER'S Iliad. In English Prose, with Notes by T. A. Buckley, B.A. Portrait.

— **Odyssey,** Hymns, Epigrams, and Battle of the Frogs and Mice. In English Prose, with Notes and Memoir by T. A. Buckley, B.A.

HORACE. In Prose by Smart, with Notes selected by T. A. Buckley, B.A. Portrait. 3s. 6d.

JULIAN THE EMPEROR. By the Rev. C. W. King, M.A.

JUSTIN, CORNELIUS NEPOS, and Eutropius. Trans., with Notes, by Rev. J. S. Watson, M.A.

JUVENAL, PERSIUS, SULPICIA, and Lucilius. In Prose, with Notes, Chronological Tables, Arguments, by L. Evans, M.A. To which is added the Metrical Version of Juvenal and Persius by Gifford. Frontispiece.

LIVY. The History of Rome. Trans. by Dr. Spillan and others. 4 vols. Portrait.

LUCAN'S Pharsalia. In Prose, with Notes by H. T. Riley.

LUCIAN'S Dialogues of the Gods, of the Sea Gods, and of the Dead. Trans. by Howard Williams, M.A.

LUCRETIUS. In Prose, with Notes and Biographical Introduction by Rev. J. S. Watson, M.A. To which is added the Metrical Version by J. M. Good.

MARTIAL'S Epigrams, complete. In Prose, with Verse Translations selected from English Poets, and other sources. Dble. vol. (670 pages). 7s. 6d.

MOSCHUS.—See *Theocritus*.

OVID'S Works, complete. In Prose, with Notes and Introduction. 3 vols.

PAUSANIAS' Description of Greece. Translated into English, with Notes and Index. By Arthur Richard Shilleto, M.A., sometime Scholar of Trinity College, Cambridge. 2 vols.

PHALARIS. Bentley's Dissertations upon the Epistles of Phalaris, Themistocles, Socrates, Euripides, and the Fables of Aesop. With Introduction and Notes by Prof. W. Wagner, Ph.D.

PINDAR. In Prose, with Introduction and Notes by Dawson W. Turner. Together with the Metrical Version by Abraham Moore. Portrait.

PLATO'S Works. Trans., with Introduction and Notes. 6 vols.

— **Dialogues.** A Summary and Analysis of. With Analytical Index to the Greek text of modern editions and to the above translations, by A. Day, LL.D.

PLAUTUS'S Comedies. In Prose, with Notes and Index by H. T. Riley, B.A. 2 vols.

PLINY'S Natural History. Trans., with Notes, by J. Bostock, M.D., F.R.S., and H. T. Riley, B.A. 6 vols.

PLINY. The Letters of Pliny the Younger. Melmoth's Translation, revised, with Notes and short Life, by Rev. F. C. T. Bosanquet, M.A.

PLUTARCH'S Morals. Theosophical Essays. Trans. by C. W. King, M.A. N.S. — **Lives.** See page 7.

PROPERTIUS, The Elegies of. With Notes, Literally translated by the Rev. P. J. F. Gantillon, M.A., with metrical versions of Select Elegies by Nott and Elton. 3s. 6d.

QUINTILIAN'S Institutes of Oratory. Trans., with Notes and Biographical Notice, by Rev. J. S. Watson, M.A. 2 vols.

SALLUST, FLORUS, and VELLEIUS PATERCULUS. Trans., with Notes and Biographical Notices, by J. S. Watson, M.A.

SENECA DE BENEFICIIS. Newly translated by Aubrey Stewart, M.A. 3s. 6d. N.S.

SENECA'S Minor Works. Translated by A. Stewart, M.A. [In the press.]

SOPHOCLES. The Tragedies of. In Prose, with Notes, Arguments, and Introduction. Portrait.

STRABO'S Geography. Trans., with Notes, by W. Falconer, M.A., and H. C. Hamilton. Copious Index, giving Ancient and Modern Names. 3 vols.

SUETONIUS' Lives of the Twelve Caesars and Lives of the Grammarians. The Translation of Thomson, revised, with Notes, by T. Forester.

TACITUS. The Works of. Trans., with Notes. 2 vols.

TERENCE and PHÆDRUS. In English Prose, with Notes and Arguments, by H. T. Riley, B.A. To which is added Smart's Metrical Version of Phædrus. With Frontispiece.

THEOCRITUS, BION, MOSCHUS, and Tyrtaeus. In Prose, with Notes and Arguments, by Rev. J. Banks, M.A. To which are appended the METRICAL VERSIONS of Chapman. Portrait of Theocritus.

THUCYDIDES. The Peloponnesian War. Trans., with Notes, by Rev. H. Dale. Portrait. 2 vols. 3s. 6d. each.

TYRTÆUS.—See *Theocritus*.

VIRGIL. The Works of. In Prose, with Notes by Davidson. Revised, with additional Notes and Biographical Notice, by T. A. Buckley, B.A. Portrait. 3s. 6d.

XENOPHON'S Works. Trans., with Notes, by J. S. Watson, M.A., and others. Portrait. In 3 vols.

COLLEGIATE SERIES.

10 Vols. at 5s. each. (2l. 10s. per set.)

DANTE. The Inferno. Prose Trans., with the Text of the Original on the same page, and Explanatory Notes, by John A. Carlyle, M.D. Portrait. N. S.

— **The Purgatorio.** Prose Trans., with the Original on the same page, and Explanatory Notes, by W. S. Dugdale. N. S.

NEW TESTAMENT (The) in Greek. Griesbach's Text, with the Readings of Mill and Scholz at the foot of the page, and Parallel References in the margin. Also a Critical Introduction and Chronological Tables. Two Fac-similes of Greek Manuscripts. 650 pages. 3s. 6d.

— or bound up with a Greek and English Lexicon to the New Testament (250 pages additional, making in all 900). 5s.

The Lexicon may be had separately, price 2s.

DOBREE'S Adversaria. (Notes on the Greek and Latin Classics.) Edited by the late Prof. Wagner. 2 vols.

DONALDSON (Dr.) The Theatre of the Greeks. With Supplementary Treatise on the Language, Metres, and Prosody of the Greek Dramatists. Numerous Illustrations and 3 Plans. By J. W. Donaldson, D.D. N. S.

KEIGHTLEY'S (Thomas) Mythology of Ancient Greece and Italy. Revised by Leonhard Schmitz, Ph.D., LL.D. 12 Plates. N. S.

HERODOTUS, Notes on. Original and Selected from the best Commentators. By D. W. Turner, M.A. Coloured Map.

— **Analysis and Summary of,** with a Synchronistical Table of Events—Tables of Weights, Measures, Money, and Distances—an Outline of the History and Geography—and the Dates completed from Gaisford, Baehr, &c. By J. T. Wheeler.

THUCYDIDES. An Analysis and Summary of. With Chronological Table of Events, &c., by J. T. Wheeler.

SCIENTIFIC LIBRARY.

56 Vols. at 5s. each, excepting those marked otherwise. (14l. 10s. 6d. per set.)

AGASSIZ and GOULD. Outline of Comparative Physiology touching the Structure and Development of the Races of Animals living and extinct. For Schools and Colleges. Enlarged by Dr. Wright. With Index and 300 Illustrative Woodcuts.

BOLLEY'S Manual of Technical Analysis; a Guide for the Testing and Valuation of the various Natural and Artificial Substances employed in the Arts and Domestic Economy, founded on the work of Dr. Bolley. Edit. by Dr. Paul. 100 Woodcuts.

BRIDGEWATER TREATISES.

— **Bell (Sir Charles) on the Hand;** its Mechanism and Vital Endowments, as evincing Design. Preceded by an Account of the Author's Discoveries in the Nervous System by A. Shaw. Numerous Woodcuts.

— **Kirby on the History, Habits, and Instincts of Animals.** With Notes by T. Rymer Jones. 100 Woodcuts. 2 vols.

— **Whewell's Astronomy and General Physics,** considered with reference to Natural Theology. Portrait of the Earl of Bridgewater. 3s. 6d.

BRIDGEWATER TREATISES.—Continued.

— **Chalmers on the Adaptation of External Nature to the Moral and Intellectual Constitution of Man.** With Memoir by Rev. Dr. Cumming. Portrait.

— **Prout's Treatise on Chemistry, Meteorology, and the Function of Digestion,** with reference to Natural Theology. Edit. by Dr. J. W. Griffith. 2 Maps.

— **Buckland's Geology and Mineralogy.** With Additions by Prof. Owen, Prof. Phillips, and R. Brown. Memoir of Buckland. Portrait. 2 vols. 15s. Vol. I. Text. Vol. II. 90 large plates with letter-press.

— **Roget's Animal and Vegetable Physiology.** 463 Woodcuts. 2 vols. 6s. each.

— **Kidd on the Adaptation of External Nature to the Physical Condition of Man.** 3s. 6d.

CARPENTER'S (Dr. W. B.) Zoology. A Systematic View of the Structure, Habits, Instincts, and Uses of the principal Families of the Animal Kingdom, and of the chief Forms of Fossil Remains. Revised by W. S. Dallas, F.L.S. Numerous Woodcuts. 2 vols. 6s. each.

CARPENTER'S Works.—Continued.

— **Mechanical Philosophy, Astronomy, and Horology.** A Popular Exposition. 181 Woodcuts.

— **Vegetable Physiology and Systematic Botany.** A complete Introduction to the Knowledge of Plants. Revised by E. Lankester, M.D., &c. Numerous Woodcuts. 6s.

— **Animal Physiology.** Revised Edition. 300 Woodcuts. 6s.

CHEVREUL on Colour. Containing the Principles of Harmony and Contrast of Colours, and their Application to the Arts; including Painting, Decoration, Tapestries, Carpets, Mosaics, Glazing, Staining, Calico Printing, Letterpress Printing, Map Colouring, Dress, Landscape and Flower Gardening, &c. Trans. by C. Martel. Several Plates.

— With an additional series of 16 Plates in Colours, 7s. 6d.

ENNEMOSER'S History of Magic. Trans. by W. Howitt. With an Appendix of the most remarkable and best authenticated Stories of Apparitions, Dreams, Second Sight, Table-Turning, and Spirit-Rapping, &c. 2 vols.

HIND'S Introduction to Astronomy. With Vocabulary of the Terms in present use. Numerous Woodcuts. 3s. 6d. N.S.

HOGG'S (Jabez) Elements of Experimental and Natural Philosophy. Being an Easy Introduction to the Study of Mechanics, Pneumatics, Hydrostatics, Hydraulics, Acoustics, Optics, Caloric, Electricity, Voltaism, and Magnetism. 400 Woodcuts.

HUMBOLDT'S Cosmos; or, Sketch of a Physical Description of the Universe. Trans. by E. C. Otté, B. H. Paul, and W. S. Dallas, F.L.S. Portrait. 5 vols. 3s. 6d. each, excepting vol. v., 5s.

— **Personal Narrative of his Travels in America during the years 1799-1804.** Trans., with Notes, by T. Ross. 3 vols.

— **Views of Nature; or, Contemplations of the Sublime Phenomena of Creation, with Scientific Illustrations.** Trans. by E. C. Otté.

HUNT'S (Robert) Poetry of Science; or, Studies of the Physical Phenomena of Nature. By Robert Hunt, Professor at the School of Mines.

JOYCE'S Scientific Dialogues. A Familiar Introduction to the Arts and Sciences. For Schools and Young People. Numerous Woodcuts.

— **Introduction to the Arts and Sciences, for Schools and Young People.** Divided into Lessons with Examination Questions. Woodcuts. 3s. 6d.

JUKES-BROWNE'S Student's Handbook of Physical Geology. By A. J. Jukes-Browne, of the Geological Survey of England. With numerous Diagrams and Illustrations, 6s. N.S.

— **The Student's Handbook of Historical Geology.** By A. J. Jukes-Brown, B.A., F.G.S., of the Geological Survey of England and Wales. With numerous Diagrams and Illustrations. 6s. N.S.

KNIGHT'S (Charles) Knowledge is Power. A Popular Manual of Political Economy.

LECTURES ON PAINTING by the Royal Academicians, Barry, Opie, Fuseli. With Introductory Essay and Notes by R. Wornum. Portrait of Fuseli.

LILLY. Introduction to Astrology. With a Grammar of Astrology and Tables for calculating Nativities, by Zadkiel.

MANTELL'S (Dr.) Geological Excursions through the Isle of Wight and along the Dorset Coast. Numerous Woodcuts and Geological Map.

— **Petrifications and their Teachings.** Handbook to the Organic Remains in the British Museum. Numerous Woodcuts. 6s.

— **Wonders of Geology; or, a Familiar Exposition of Geological Phenomena.** A coloured Geological Map of England, Plates, and 200 Woodcuts. 2 vols. 7s. 6d. each.

MORPHY'S Games of Chess, being the Matches and best Games played by the American Champion, with explanatory and analytical Notes by J. Löenthal. With short Memoir and Portrait of Morphy.

SCHOUW'S Earth, Plants, and Man. Popular Pictures of Nature. And Kobbell's Sketches from the Mineral Kingdom. Trans. by A. Henfrey, F.R.S. Coloured Map of the Geography of Plants.

SMITH'S (Pye) Geology and Scripture; or, the Relation between the Scriptures and Geological Science. With Memoir.

STANLEY'S Classified Synopsis of the Principal Painters of the Dutch and Flemish Schools, including an Account of some of the early German Masters. By George Stanley.

STAUNTON'S Chess-Player's Handbook. A Popular and Scientific Introduction to the Game, with numerous Diagrams and Coloured Frontispiece. N.S.

STAUNTON.—Continued.

— **Chess Praxis.** A Supplement to the Chess-player's Handbook. Containing the most important modern Improvements in the Openings; Code of Chess Laws; and a Selection of Morphy's Games. Annotated. 636 pages. Diagrams. 6s.

— **Chess-Player's Companion.** Comprising a Treatise on Odds, Collection of Match Games, including the French Match with M. St. Amant, and a Selection of Original Problems. Diagrams and Coloured Frontispiece.

— **Chess Tournament of 1851.** A Collection of Games played at this celebrated assemblage. With Introduction and Notes. Numerous Diagrams.

STOCKHARDT'S Experimental

Chemistry. A Handbook for the Study of the Science by simple Experiments. Edit. by C. W. Heaton, F.C.S. Numerous Woodcuts. N.S.

URE'S (Dr. A.) Cotton Manufacture of Great Britain, systematically investigated; with an Introductory View of its Comparative State in Foreign Countries. Revised by P. L. Simmonds. 150 Illustrations. 2 vols.

— **Philosophy of Manufactures,** or an Exposition of the Scientific, Moral, and Commercial Economy of the Factory System of Great Britain. Revised by P. L. Simmonds. Numerous Figures. 800 pages. 7s. 6d.

ECONOMICS AND FINANCE.

GILBART'S History, Principles, and Practice of Banking. Revised to 1881 by A. S. Michie, of the Royal Bank of Scotland. Portrait of Gilbart. 2 vols. 10s. N.S.

REFERENCE LIBRARY.

28 Volumes at Various Prices. (8l. 10s. per set.)

BLAIR'S Chronological Tables. Comprehending the Chronology and History of the World, from the Earliest Times to the Russian Treaty of Peace, April 1856. By J. W. Rosse. 800 pages. 10s.

— **Index of Dates.** Comprehending the principal Facts in the Chronology and History of the World, from the Earliest to the Present, alphabetically arranged; being a complete Index to the foregoing. By J. W. Rosse. 2 vols. 5s. each.

BOHN'S Dictionary of Quotations from the English Poets. 4th and cheaper Edition. 6s.

BUCHANAN'S Dictionary of Science and Technical Terms used in Philosophy, Literature, Professions, Commerce, Arts, and Trades. By W. H. Buchanan, with Supplement. Edited by Jas. A. Smith. 6s.

CHRONICLES OF THE TOMBS. A Select Collection of Epitaphs, with Essay on Epitaphs and Observations on Sepulchral Antiquities. By T. J. Pettigrew, F.R.S., F.S.A. 5s.

CLARK'S (Hugh) Introduction to Heraldry. Revised by J. R. Planché. 5s. 950 Illustrations.

— *With the Illustrations coloured,* 15s. N.S.

COINS, Manual of. —See Humphreys.

DATES, Index of. —See Blair.

DICTIONARY of Obsolete and Provincial English. Containing Words from English Writers previous to the 19th Century. By Thomas Wright, M.A., F.S.A., &c. 2 vols. 5s. each.

PIGRAMMATISTS (The). A Selection from the Epigrammatic Literature of Ancient, Mediaeval, and Modern Times. With Introduction, Notes, Observations, Illustrations, an Appendix on Works connected with Epigrammatic Literature, by Rev. H. Dodd, M.A. 6s. N.S.

GAMES, Handbook of. Comprising Treatises on above 40 Games of Chance, Skill, and Manual Dexterity, including Whist, Billiards, &c. Edit. by Henry G. Bohn. Numerous Diagrams. 5s. N.S.

HENFREY'S Guide to English Coins. Revised Edition, by C. F. Keary, M.A., F.S.A. With an Historical Introduction. 6s. N.S.

HUMPHREYS' Coin Collectors' Manual. An Historical Account of the Progress of Coinage from the Earliest Time, by H. N. Humphreys. 140 Illustrations. 2 vols. 5s. each. N.S.

LOWNDES' Bibliographer's Manual of English Literature. Containing an Account of Rare and Curious Books published in or relating to Great Britain and Ireland, from the Invention of Printing, with Biographical Notices and Prices, by W. T. Lowndes. Parts I.-X. (A to Z), 3s. 6d. each. Part XI. (Appendix Vol.), 5s. Or the 11 parts in 4 vols., half morocco, 2l. 2s.

MEDICINE, Handbook of Domestic, Popularly Arranged. By Dr. H. Davies. 700 pages. 5s.

NOTED NAMES OF FICTION. Dictionary of. Including also Familiar Pseudonyms, Surnames bestowed on Eminent Men, &c. By W. A. Wheeler, M.A. 5s. N.S.

POLITICAL CYCLOPÆDIA. A Dictionary of Political, Constitutional, Statistical, and Forensic Knowledge; forming a Work of Reference on subjects of Civil Administration, Political Economy, Finance, Commerce, Laws, and Social Relations. 4 vols. 3s. 6d. each.

PROVERBS, Handbook of. Containing an entire Republication of Ray's Collection, with Additions from Foreign Languages and Sayings, Sentences, Maxims, and Phrases. 5s.

— **A Polyglot of Foreign.** Comprising French, Italian, German, Dutch, Spanish, Portuguese, and Danish. With English Translations. 5s.

SYNONYMS and ANTONYMS; or, Kindred Words and their Opposites, Collected and Contrasted by Ven. C. J. Smith, M.A. 5s. N.S.

WRIGHT (Th.)—See Dictionary.

NOVELISTS' LIBRARY.

11 Volumes at 3s. 6d. each, excepting those marked otherwise. (2l. 1s. 6d. per set.)

BURNEY'S Evelina; or, a Young Lady's Entrance into the World. By F. Burney (Mme. D'Arblay). With Introduction and Notes by A. R. Ellis, Author of 'Sylvestra,' &c. N.S.

— **Cecilia.** With Introduction and Notes by A. R. Ellis. 2 vols. N.S.

EBERS' Egyptian Princess. Trans. by Emma Buchheim. N.S.

FIELDING'S Joseph Andrews and his Friend Mr. Abraham Adams. With Roscoe's Biography. Cruikshank's Illustrations. N.S.

— **Amelia.** Roscoe's Edition, revised. Cruikshank's Illustrations. 5s. N.S.

FIELDING.—Continued.

— **History of Tom Jones, a Foundling.** Roscoe's Edition. Cruikshank's Illustrations. 2 vols. N.S.

GROSSI'S Marco Visconti. Trans. by A. F. D. N.S.

MANZONI. The Betrothed: being a Translation of 'I Promessi Sposi.' Numerous Woodcuts. 1 vol. (732 pages) 5s. N.S.

STOWE (Mrs. H. B.) Uncle Tom's Cabin; or, Life among the Lowly. 8 full-page Illustrations. N.S.

ARTISTS' LIBRARY.

7 Volumes at Various Prices. (1l. 18s. 6d. per set.)

BELL (Sir Charles). The Anatomy and Philosophy of Expression, as Connected with the Fine Arts. 5s. N.S.

DEMMIN. History of Arms and Armour from the Earliest Period. By Auguste Demmin. Trans. by C. C. Black, M.A., Assistant Keeper, S. K. Museum. 1900 Illustrations. 7s. 6d. N.S.

FAIRHOLT'S Costume in England. Third Edition. Enlarged and Revised by the Hon. H. A. Dillon, F.S.A. With more than 700 Engravings. 2 vols. 5s. each. N.S.

Vol. I. History. Vol. II. Glossary.

FLAXMAN. Lectures on Sculpture. With Three Addresses to the R.A. by Sir R. Westmacott, R.A., and Memoir of Flaxman. Portrait and 53 Plates. 6s. N.S.

HEATON'S Concise History of Painting. [In the press.]

LEONARDO DA VINCI'S Treatise on Painting. Trans. by J. F. Rigaud, R.A. With a Life and an Account of his Works by J. W. Brown. Numerous Plates. 5s. N.S.

PLANCHÉ'S History of British Costume, from the Earliest Time to the 19th Century. By J. R. Planché. 400 Illustrations. 5s. N.S.

BOHN'S CHEAP SERIES.

PRICE ONE SHILLING EACH.

A Series of Complete Stories or Essays, mostly reprinted from Vols. in Bohn's Libraries, and neatly bound in stiff paper cover, with cut edges, suitable for Railway Reading.

ASCHAM (ROGER).—

SCHOLEMASTER. By PROFESSOR MAYOR.

CARPENTER (DR. W. B.).—

PHYSIOLOGY OF TEMPERANCE AND TOTAL ABSTINENCE.

EMERSON.—

ENGLAND AND ENGLISH CHARACTERISTICS. Lectures on the Race, Ability, Manners, Truth, Character, Wealth, Religion, &c. &c.

NATURE : An Essay. To which are added Orations, Lectures and Addresses.

REPRESENTATIVE MEN : Seven Lectures on PLATO, SWEDENBORG, MONTAIGNE, SHAKESPEARE, NAPOLEON, and GOETHE.

TWENTY ESSAYS on Various Subjects.

THE CONDUCT OF LIFE.

FRANKLIN (BENJAMIN).—

AUTOBIOGRAPHY. Edited by J. SPARKS.

HAWTHORNE (NATHANIEL).—

TWICE-TOLD TALES. Two Vols. in One.

SNOW IMAGE, and other Tales.

SCARLET LETTER.

HOUSE WITH THE SEVEN GABLES.

TRANSFORMATION ; or the Marble Fawn. Two Parts.

HAZLITT (W.).—

TABLE-TALK : Essays on Men and Manners. Three Parts.

PLAIN SPEAKER : Opinions on Books, Men, and Things. Three Parts.

LECTURES ON THE ENGLISH COMIC WRITERS.

LECTURES ON THE ENGLISH POETS.

HAZLITT (W.).—Continued.

LECTURES ON THE CHARACTERS OF SHAKESPEARE'S PLAYS.

LECTURES ON THE LITERATURE OF THE AGE OF ELIZABETH, chiefly Dramatic.

IRVING (WASHINGTON).—

LIFE OF MOHAMMED. With Portrait.

LIVES OF SUCCESSORS OF MOHAMMED.

LIFE OF GOLDSMITH.

SKETCH-BOOK.

TALES OF A TRAVELLER.

TOUR ON THE PRAIRIES.

CONQUESTS OF GRANADA AND SPAIN. Two Parts.

LIFE AND VOYAGES OF COLUMBUS. Two Parts.

COMPANIONS OF COLUMBUS: Their Voyages and Discoveries.

ADVENTURES OF CAPTAIN BONNEVILLE in the Rocky Mountains and the Far West.

KNICKERBOCKER'S HISTORY OF NEW YORK, from the Beginning of the World to the End of the Dutch Dynasty.

TALES OF THE ALHAMBRA.

CONQUEST OF FLORIDA UNDER HERNANDO DE SOTO.

ABBOTSFORD AND NEWSTEAD ABBEY.

SALMAGUNDI; or, The Whim-Whams and Opinions of LAUNCELOT LANGSTAFF, Esq.

BRACEBRIDGE HALL; or, The Humourists.

ASTORIA; or, Anecdotes of an Enterprise beyond the Rocky Mountains.

WOLFERT'S ROOST, and Other Tales.

LAMB (CHARLES).—

ESSAYS OF ELIA. With a Portrait.

LAST ESSAYS OF ELIA.

ELIANA. With Biographical Sketch.

MARRYAT (CAPTAIN).

PIRATE AND THE THREE CUTTERS. With a Memoir of the Author.

The only authorised Edition; no others published in England contain the Derivations and Etymological Notes of Dr. Mahn, who devoted several years to this portion of the Work.

WEBSTER'S DICTIONARY OF THE ENGLISH LANGUAGE.

Thoroughly revised and improved by CHAUNCEY A. GOODRICH, D.D., LL.D., and NOAH PORTER, D.D., of Yale College.

THE GUINEA DICTIONARY.

New Edition [1880], with a Supplement of upwards of 4600 New Words and Meanings.

1628 Pages. 3000 Illustrations.

The features of this volume, which render it perhaps the most useful Dictionary for general reference extant, as it is undoubtedly one of the cheapest books ever published, are as follows :—

1. COMPLETENESS.—It contains 114,000 words.
2. ACCURACY OF DEFINITION.
3. SCIENTIFIC AND TECHNICAL TERMS.
4. ETYMOLOGY.
5. THE ORTHOGRAPHY is based, as far as possible, on Fixed Principles.
6. PRONUNCIATION.
7. THE ILLUSTRATIVE CITATIONS.
8. THE SYNONYMS.
9. THE ILLUSTRATIONS, which exceed 3000.

Cloth, 21s.; half-bound in calf, 30s.; calf or half russia, 31s. 6d.; russia, 2l.

With New Biographical Appendix, containing over 9700 Names.

THE COMPLETE DICTIONARY

Contains, in addition to the above matter, several valuable Literary Appendices, and 70 extra pages of Illustrations, grouped and classified.

I vol. 1919 pages, cloth, 31s. 6d.

'Certainly the best practical English Dictionary extant.'—*Quarterly Review*, 1873.

Prospectuses, with Specimen Pages, sent post free on application.

* * * To be obtained through all Booksellers.

BOHN'S SELECT LIBRARY OF STANDARD WORKS.



THE texts in all cases will be printed without abridgment, and where Introductions, Biographical Notices and Notes, are likely to be of use to the Student, they will be given. The volumes, well printed and on good paper, will be issued at 1s. in paper covers, and 1s. 6d. in cloth.

NOW READY.

1. BACON'S ESSAYS. With Introduction and Notes.
2. LESSING'S LAOKOON. Beasley's Translation, revised, with Introduction, Notes, &c., by Edward Bell, M.A.
3. DANTE'S INFERNO. Translated, with Notes, by Rev. H. F. Cary.
4. GOETHE'S FAUST. Part I. Translated, with Introduction, by Anna Swanwick.
5. GOETHE'S BOYHOOD. Being Part I. of the Autobiography. Translated by J. Oxenford.
6. SCHILLER'S MARY STUART and THE MAID OF ORLEANS. Translated by J. Mellish and Anna Swanwick.
7. THE QUEEN'S ENGLISH. By the late Dean Alford.
8. LIFE AND LABOURS OF THE LATE THOMAS BRASSEY. By Sir A. Helps, K.C.B.
9. PLATO'S DIALOGUE'S: The Apology—Crito—Phaedo—Protagoras. With Introductions.
10. MOLIÈRE'S PLAYS: The Miser—Tartuffe—The Shopkeeper turned Gentleman. With brief Memoir.
11. GOETHE'S REINEKE FOX, in English Hexameters. By A. Rogers.
12. OLIVER GOLDSMITH'S PLAYS.
13. LESSING'S PLAYS : Nathan the Wise—Minna von Barnhelm.
14. PLAUTUS'S COMEDIES : Trinummus — Menaechmi — Aululeria — Captivi.

To be followed at intervals of a fortnight by

THE BATTLE DAYS of WATERLOO.	THE VICAR OF WAKEFIELD.
PAULI'S LIFE OF OLIVER CROMWELL.	SHERIDAN'S PLAYS.
STERNE'S SENTIMENTAL JOURNEY.	PAULI'S LIFE OF ALFRED THE GREAT.
	HAUFF'S CARAVAN.

LONDON: GEORGE BELL AND SONS.

3/6

GENERAL LIBRARY
UNIVERSITY OF CALIFORNIA—BERKELEY

RETURN TO DESK FROM WHICH BORROWED

This book is due on the last date stamped below, or on the
date to which renewed.

Renewed books are subject to immediate recall.

16 Apr '54 JBM
APR 17 1954 LU

NOV 24 1974

REC. MORFITT DEC 9 '78

REC. CIR. DEC 12 1978

